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Water Resources Data for Kansas

Water Year 1977

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT KS-77-1

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Water Resources Data for Kansas

Water Year 1977

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT KS-77-1

Prepared in cooperation with the State of Kansas and with
other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR
THOMAS S. KLEPPE, Secretary

GEOLOGICAL SURVEY

W. A. Radlinski, Acting Director

For information on the water program in Kansas write to
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1950 Avenue "A" - Campus West
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Lawrence, Kansas 66045

1978

Preface

This report was prepared by personnel of the Kansas district of the Water Resources Division of the U.S. Geological Survey under the supervision of J. S. Rosenshein, District Chief, and A. Clebsch, Jr., Regional Hydrologist, Central Region. It was done in cooperation with the State of Kansas and with other agencies.

This report is one of a series issued by state. General direction for the series is by J. S. Cragwall, Jr., Chief Hydrologist, U.S. Geological Survey, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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Water resources data for the 1977 water year for Kansas consists of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality in wells. This report contains discharge records for 149 gaging stations; stage and contents for 20 lakes and reservoirs; water quality for 77 gaging stations and 2 lakes; and water levels for 463 observation wells and water quality for 269 wells. Also included are data for 132 crest-stage partial-record stations and 23 low-flow partial-record stations. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Kansas.

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INTRODUCTION

Water resources data for the 1977 water year for Kansas consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This report contains discharge records for 149 gaging stations; stage and contents for 20 lakes and reservoirs; water-quality records for 71 gaging stations, 2 lakes, and 269 wells; and water levels for 463 observation wells. Also included are 132 crest-stage partial-record stations and 23 low-flow partial-record stations. Locations of complete-record surface-water gaging stations, 1977 water year, are shown in Figure 1. Locations of partial-record surface-water gaging stations, 1977 water year, are shown in Figure 2. Locations of surface-water-quality stations, 1977 water year, are shown in Figure 3. Locations of ground-water-level stations, 1977 water year, are shown in Figure 4. Locations of ground-water-quality stations, 1977 water year, are shown in Figure 5. Additional water data were collected at various sites, not involved in the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Kansas.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States". Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States". Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled, "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 604 South Pickett Street, Alexandria, Va. 22304.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report KS-77-1." Water-Data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22161.

COOPERATION

The U.S. Geological Survey and organizations of the State of Kansas have had cooperative agreements for the systematic collection of streamflow records since 1895, for water-quality records since 1957, and for ground-water level records since 1934. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Kansas Water Resources Board, J. A. Power, Jr., Executive Director

Kansas Department of Health and Environment, Division of
Environment, M. W. Gray, Director

Kansas Geological Survey, W. W. Hambleton, State Geologist
and Director

Kansas Department of Transportation, E. E. Wilkinson,
Bridge Engineer

Kansas State Board of Agriculture, Division of Water Resources,
G. E. Gibson, Chief Engineer

City of Wichita, M. S. Mitchell, Assistant Superintendent of
Public Works Maintenance

The following Federal agencies assisted in collection of records published in this report by furnishing funds or services:

Corps of Engineers, U.S. Army, in collecting records for 79 gaging stations and 6 water-quality stations.

Soil Conservation Service, U.S. Department of Agriculture, in collecting records for 12 water-quality stations.

Environmental Protection Agency, in collecting records for 6 water-quality stations.

Bureau of Reclamation, U.S. Department of the Interior, in collecting records for 2 gaging stations and 6 water-quality stations.

Bureau of Sports Fisheries and Wildlife, U.S. Department of the Interior, in collecting records for 1 gaging station.

Organizations that supplied data are acknowledged in station descriptions.

HYDROLOGIC CONDITIONS

Precipitation in the beginning months of the 1977 water year was the lowest of record in many parts of the State. The drought conditions continued until the April to May period. Precipitation and streamflow returned to near or above median during June through August. The heavy precipitation and streamflow in the latter half of the water year brought the annual mean streamflow in the eastern half of the State generally above median. Record-breaking floods occurred in and near Kansas City on September 11-13.

Monthly and annual mean discharge is compared with median at three representative gaging stations in figure 6.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting English units to International System of units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams (mg) dry weight of algae produced per liter (L) of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Immediate coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliters (mL) of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococci bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters or liters.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream.

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to the amount of substance present in true chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (colloidal) suspended particles. Analyses are performed on filtered samples.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage", although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Milligrams or micrograms per liter may be converted to millequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by using the factors in table 1. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of sediment per liter of water-sediment mixture. Sediment concentrations may be converted to parts per million (ppm) by using the factors in table 2.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters, acres, or hectares. Periphyton benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters or liters. Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle-size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation.
Silt..........	.004 - .062	Sedimentation.
Sand..........	.062 - 2.0	Sedimentation or sieve.
Gravel........	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass or volume.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times milligrams per liter times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water. A graph of the variation of the yearly maximums, minimums, means, and mean for period of record of specific conductance for Smoky Hill River at Enterprise is shown in figure 7.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lived.

Artificial substrate is a device that is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45-micrometer filter.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the milligrams per liter of the constituent, times the factor 0.0027, times the number of days.

Weighted average is used in this report to indicate discharge-weighted average and is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 06884400, which appears just to the left of the station name, includes the 2-digit part number "06" plus the 6-digit downstream order number "884400".

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 8 below.

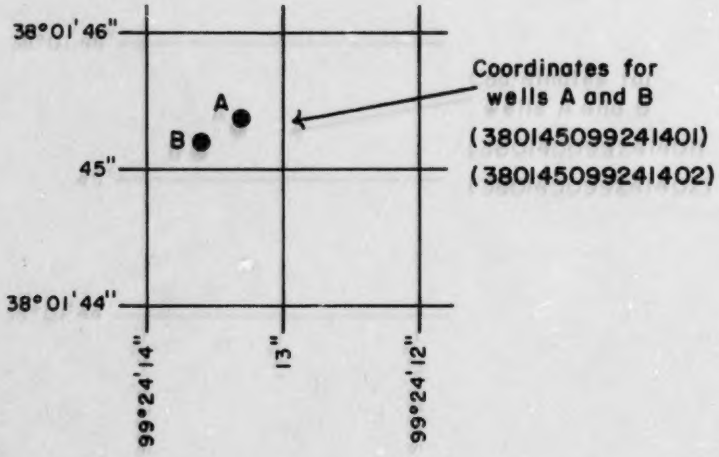


Figure 8. System for numbering wells and miscellaneous sites (latitude and longitude)

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard text-books, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a table showing the daily elevations is given. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD".

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given.

The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Semilarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are given for some stations which are partially regulated and shown as "Peak discharge above regulated base." Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subjected to complete control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE". Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For all gaging stations on lakes and reservoirs the data presented comprise a description of the station and a table showing daily elevation. A skeleton table of capacity at given stages is published for all reservoirs.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are presented in three tables. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a listing of instantaneous gage heights and discharges for flood hydrograph stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation, or if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For this reason, figures of cubic feet per second per square mile and of runoff in inches are not published. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated.

Other data available

Information of a more detailed nature than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Also, most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Precipitation data that is collected by the U.S. Geological Survey and State agencies is not published in the present report. The Kansas District operated many digital recorders (5- or 15-minute-punch intervals) to collect rainfall data. The sites operated during the 1977 water year are shown in Table 3. Locations of rainfall stations, 1977 water year, are shown in Figure 9.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, chloride, water temperature, sediment discharge); extremes for the period of daily record; extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For stations where specific conductances are taken manually once-daily, the samples are collected at about the same time each day.

For chemical-quality stations equipped with digital monitors, the records consist of daily mean values for specific conductance and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperatures

Water temperatures are measured at all of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. Conversions of degrees Celsius to degrees Fahrenheit are shown in Table 4. For stations where water temperatures are taken manually once daily, the water temperatures are taken about the same time each day. At stations equipped with digital monitors the records consist of daily mean temperatures and are based on hourly punches. Large streams have a small diel temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section.

Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow for predicting long-term sediment-discharge characteristics of the stream. Specific conductance values represent the transport medium at time of analysis and these values may vary from those at time of sampling.

In addition to the records of the quantities of suspended sediment, records of the periodic determination of the particle-size distribution of the suspended sediment and bed material are included.

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Collection of the data

Only ground-water-level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 8.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd), which is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-one manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Picket Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature-influential factors, field measurement, and data presentation*, by H. H. Steven Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 p. $1.60.
2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. $1.90.
2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. $1.75.
3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages. $0.25.
3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. $0.20.
3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhain: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. $0.40.
3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. $1.00.
3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. $0.30.
3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages. $0.20.
3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. $0.45.
3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. $1.25.
3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. $0.40.
3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.
3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70.
3-B2. *Introduction to ground-water hydraulics-a programed text for self-instruction*, by D. S. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. $0.65.
3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2, 1970. 59 pages. $0.70.
3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. $1.15.
4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages. $0.30.
4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. $0.20.
4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages. $0.65.
4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.
4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. $0.75.
4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. $0.65.

5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases*, by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. $2.40.

5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. $0.80.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. $0.90.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by K. V. Slack, R. C. Averett, P. E. Greeson, and R. G. Lipscomb: USGS--TWRI Book 5, Chapter A4. 1973. 165 pages. $1.95.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. $0.65.

7-C1. *Finite-difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman; USGS--TWRI book 8, Chapter A1. 1968. 23 pages. $0.70.

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. $0.40.

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter.

Ion	Multiply by	Ion	Multiply by
Aluminum (Al^{+3})*.....	0.11119	Iodide (I^{-1}).........	0.00788
Ammonia as NH_4^{+1}.....	.05544	Iron (Fe^{+3})*.........	.05372
Barium (Ba^{+2})........	.01456	Lead (Pb^{+2})*.........	.00965
Bicarbonate (HCO_3^{-1}).	.01639	Lithium (Li^{+1})*......	.14411
Bromide (Br^{-1}).......	.01251	Magnesium (Mg^{+2}).....	.08226
Calcium (Ca^{+2}).......	.04990	Manganese (Mn^{+2})*....	.03640
Carbonate (CO_3^{-2})....	.03333	Nickel (Ni^{+2})*.......	.03406
Chloride (Cl^{-1})......	.02821	Nitrate (NO_3^{-1})......	.01613
Chromium (Cr^{+6})*.....	.11539	Nitrite (NO_2^{-1})......	.02174
Cobalt (Co^{+2})*.......	.03394	Phosphate (PO_4^{-3})....	.03159
Copper (Cu^{+2})*.......	.03148	Potassium (K^{+1})......	.02557
Cyanide (CN^{-1}).......	.03844	Sodium (Na^{+1})........	.04350
Fluoride (F^{-1}).......	.05264	Strontium (Sr^{+2})*....	.02283
Hydrogen (H^{+1}).......	.99209	Sulfate (SO_4^{-2})......	.02082
Hydroxide (OH^{-1}).....	.05880	Zinc (Zn^{+2})*.........	.03060

*Constituent reported in micrograms per liter; multiply by factor and divide results by 1,000.

Table 2.--Factors for conversion of sediment concentration in milligrams per liter to parts per million.* (All values calculated to three significant figures.)

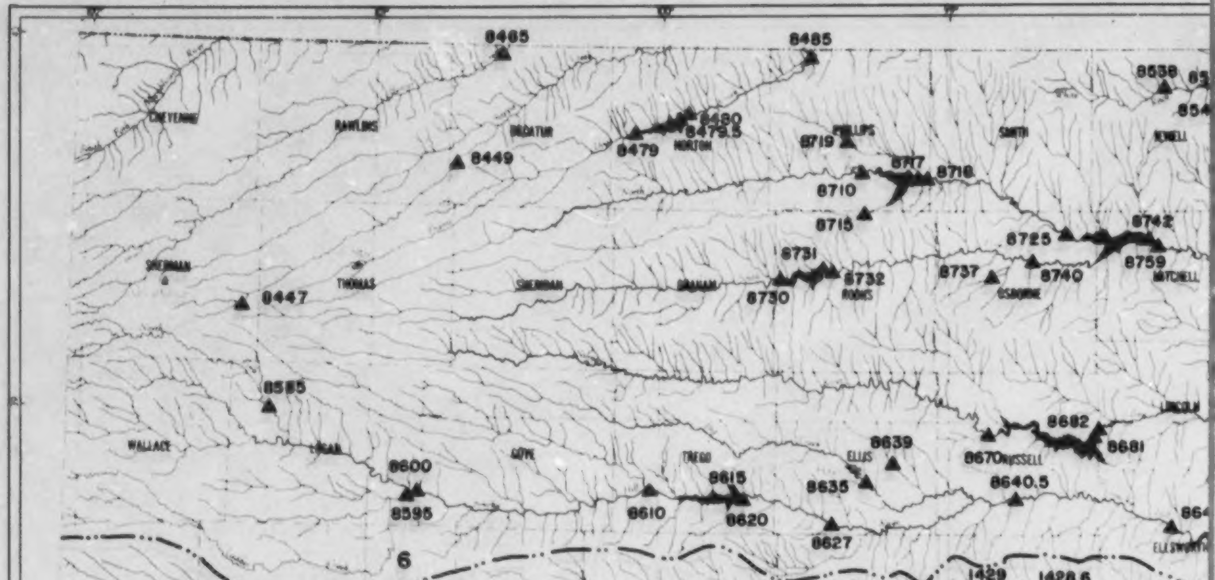
Range of concentration in 1,000 mg/L	Divide by	Range of concentration in 1,000 mg/L	Divide by	Range of concentration in 1,000 mg/L	Divide by	Range of concentration in 1,000 mg/L	Divide by
0 - 8	1.00	201-217	1.13	411-424	1.26	619-634	1.39
8.05- 24	1.01	218-232	1.14	427-440	1.27	636-650	1.40
24.2 - 40	1.02	234-248	1.15	443-457	1.28	652-666	1.41
40.5 - 56	1.03	250-264	1.16	460-473	1.29	668-682	1.42
56.5 - 72	1.04	266-280	1.17	476-489	1.30	684-698	1.43
72.5 - 88	1.05	282-297	1.18	492-506	1.31	700-715	1.44
88.5 -104	1.06	299-313	1.19	508-522	1.32	717-730	1.45
105 -120	1.07	315-329	1.20	524-538	1.33	732-747	1.46
121 -136	1.08	331-345	1.21	540-554	1.34	749-762	1.47
137 -152	1.09	347-361	1.22	556-570	1.35	765-780	1.48
153 -169	1.10	363-378	1.23	572-585	1.36	782-796	1.49
170 -185	1.11	380-393	1.24	587-602	1.37	798-810	1.50
186 -200	1.12	395-409	1.25	604-617	1.38		

*Based on water density of 1.000 g/mL and a specific gravity of sediment of 2.65.

Table 4.--Conversions of degrees Celsius (°C) to degrees Fahrenheit (°F).* (Temperature reporte to nearest 0.5°C.)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*°C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.



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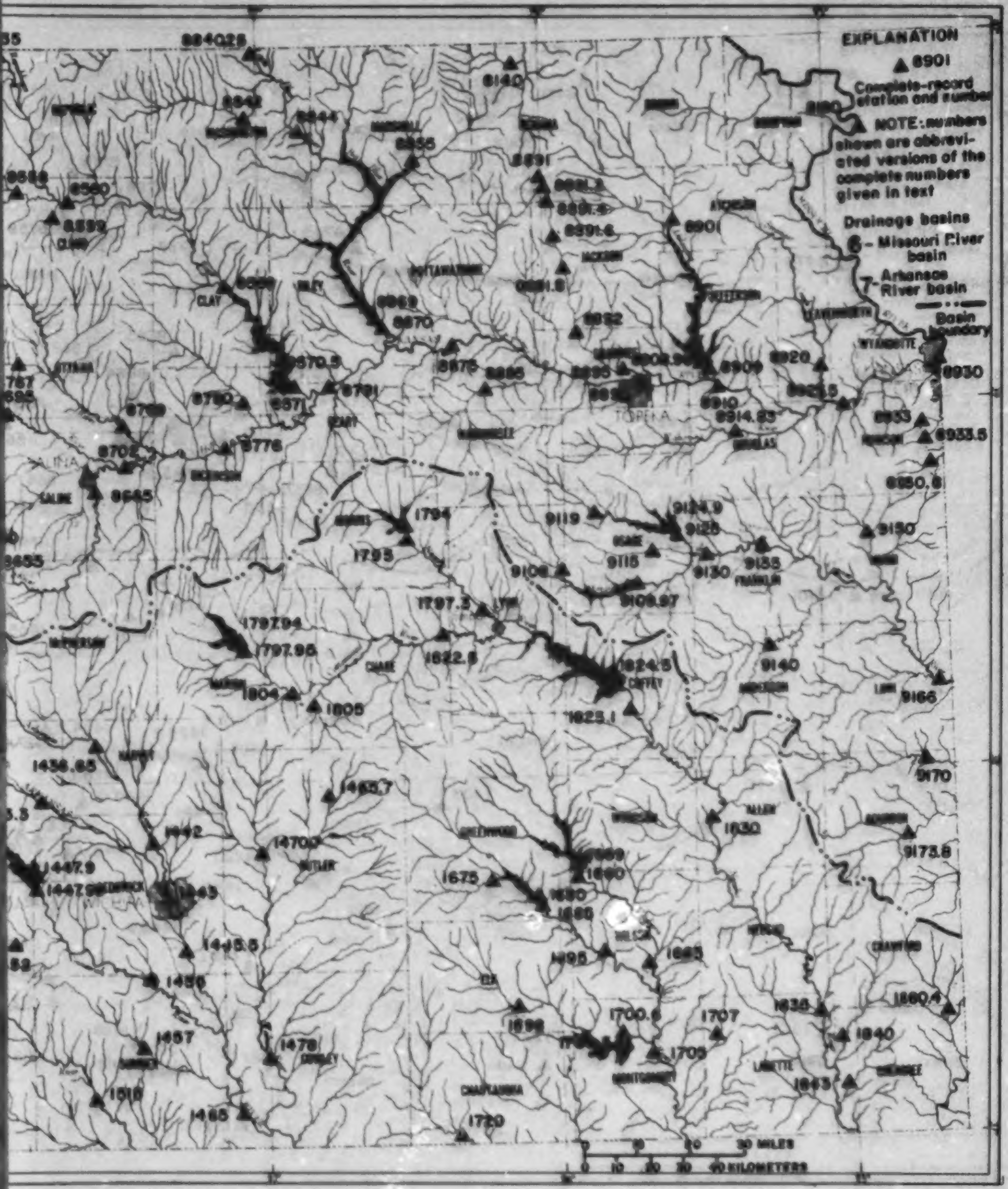
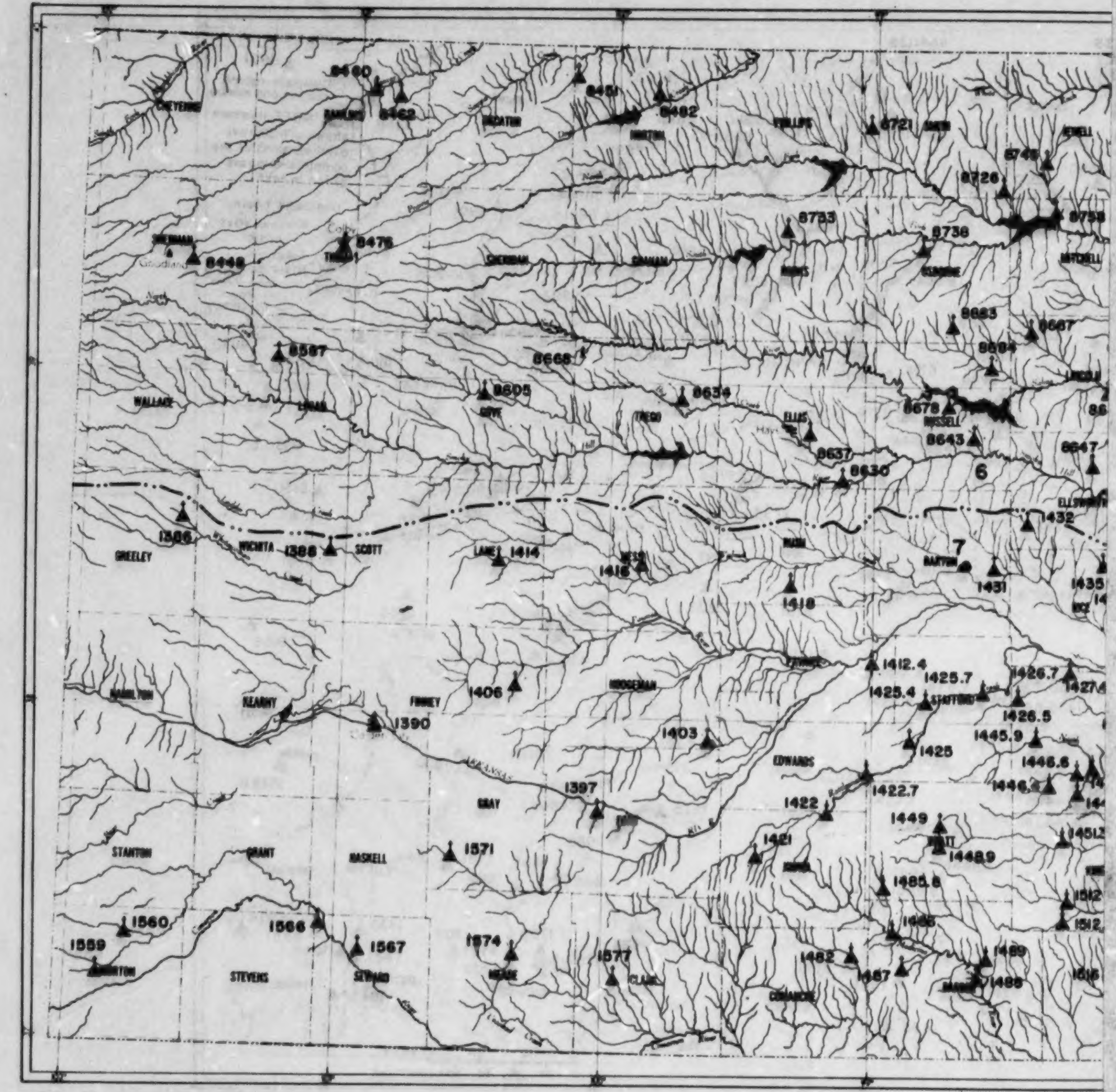


Figure 1.--Map of Kansas showing location of complete-record surface-water gaging stations, 1977 water year.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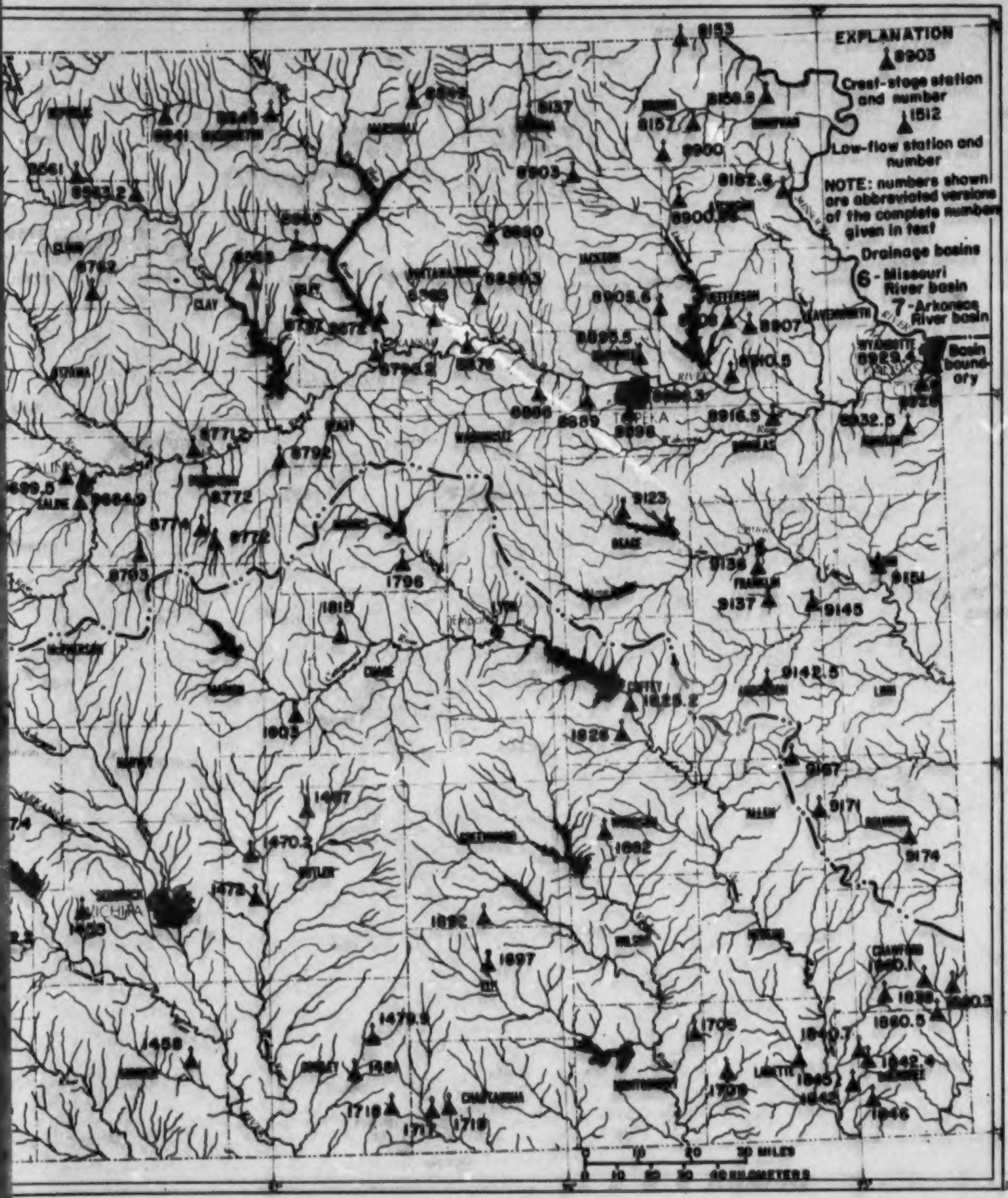
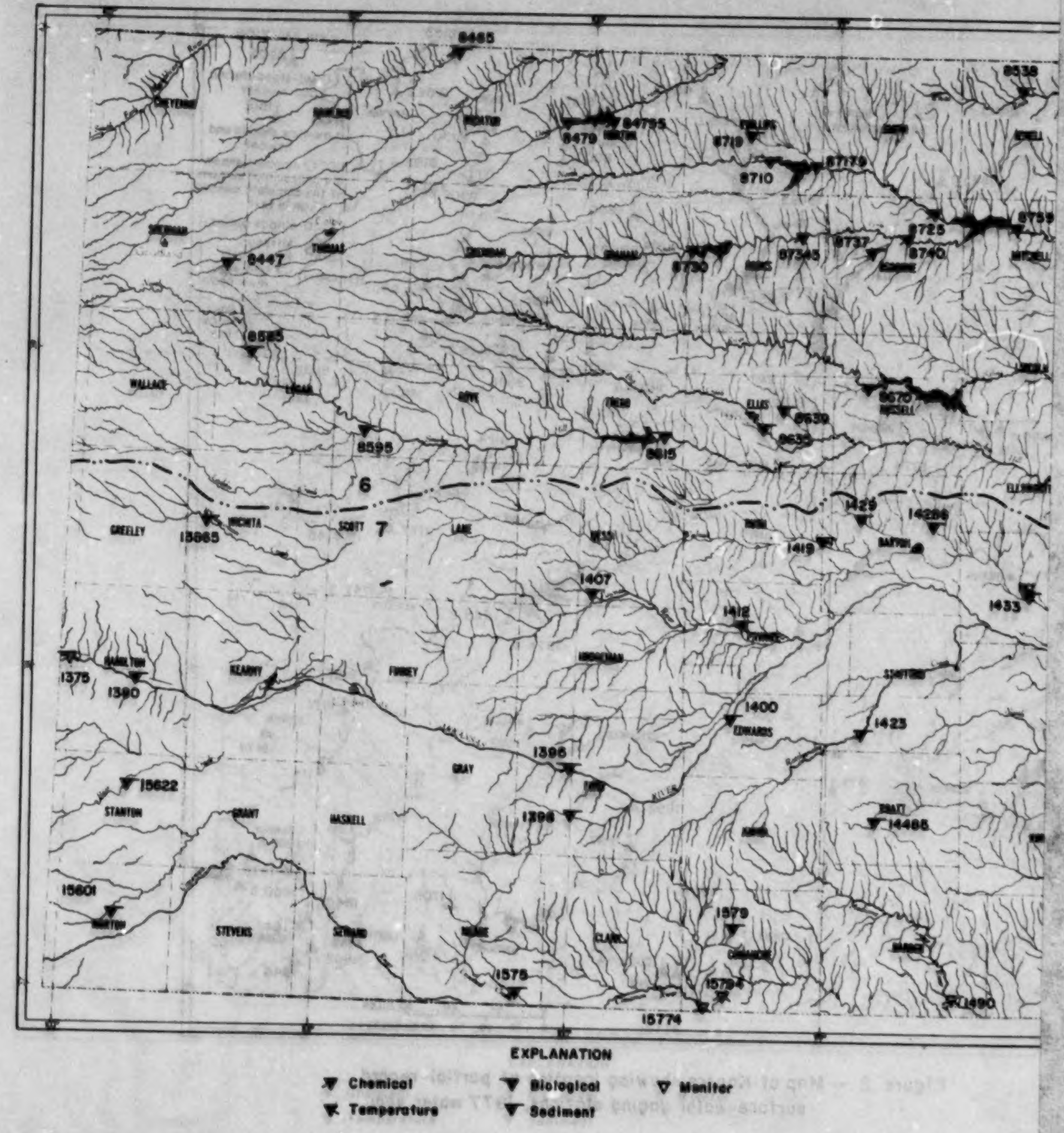


Figure 2.--Map of Kansas showing location of partial-record surface-water gaging stations, 1977 water year.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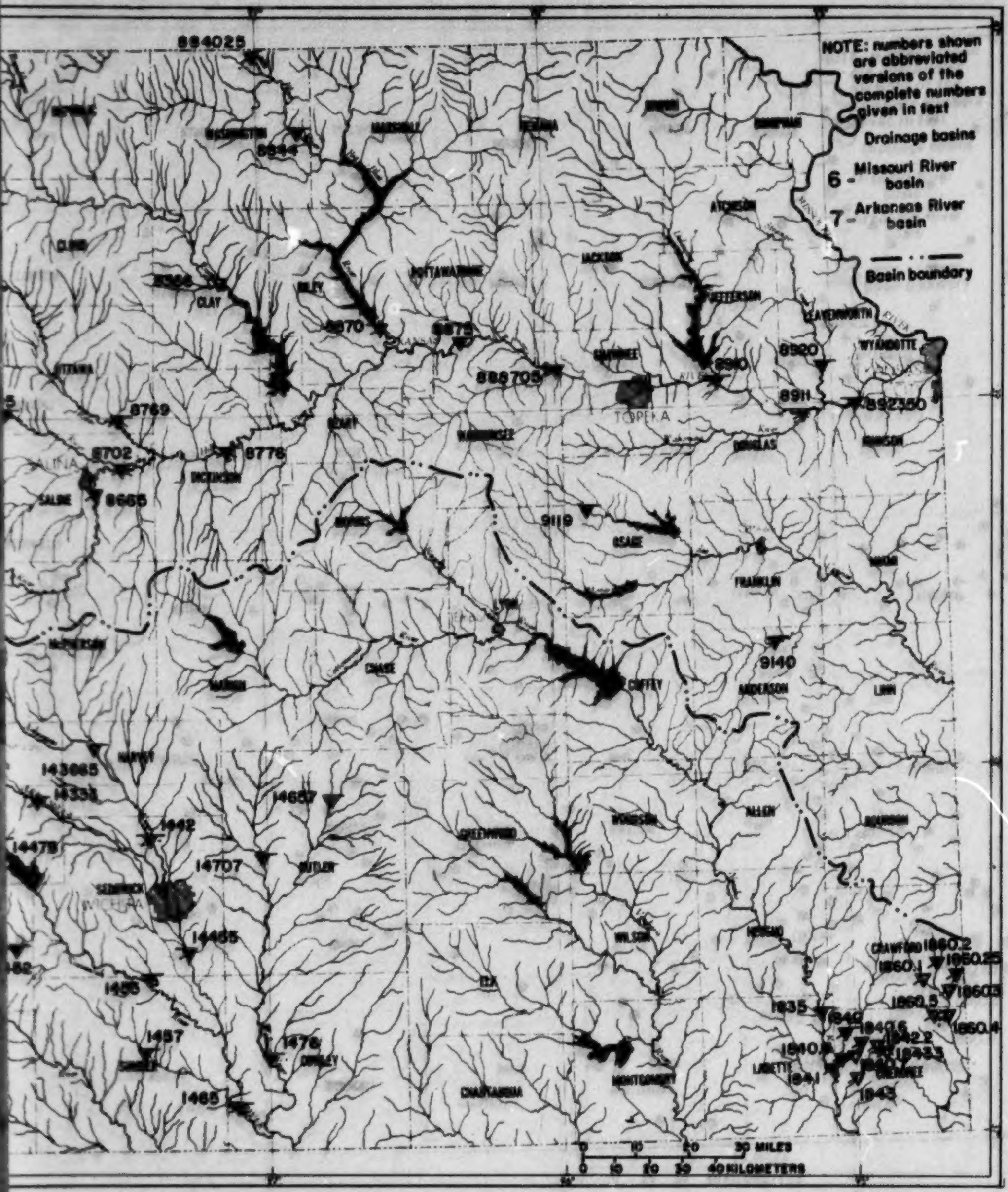
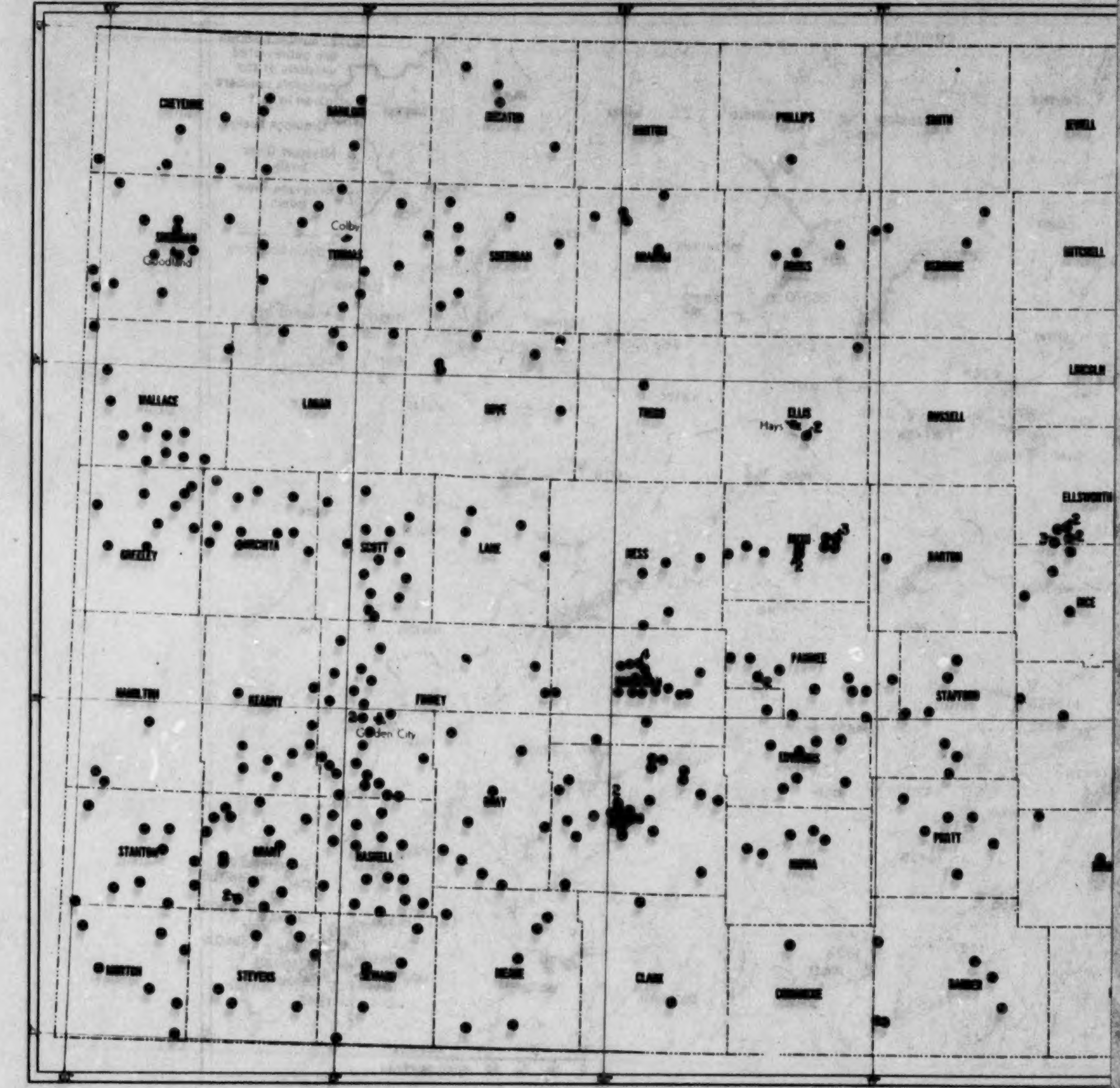


Figure 3.--Map of Kansas showing location of surface-water-quality stations, 1977 water year.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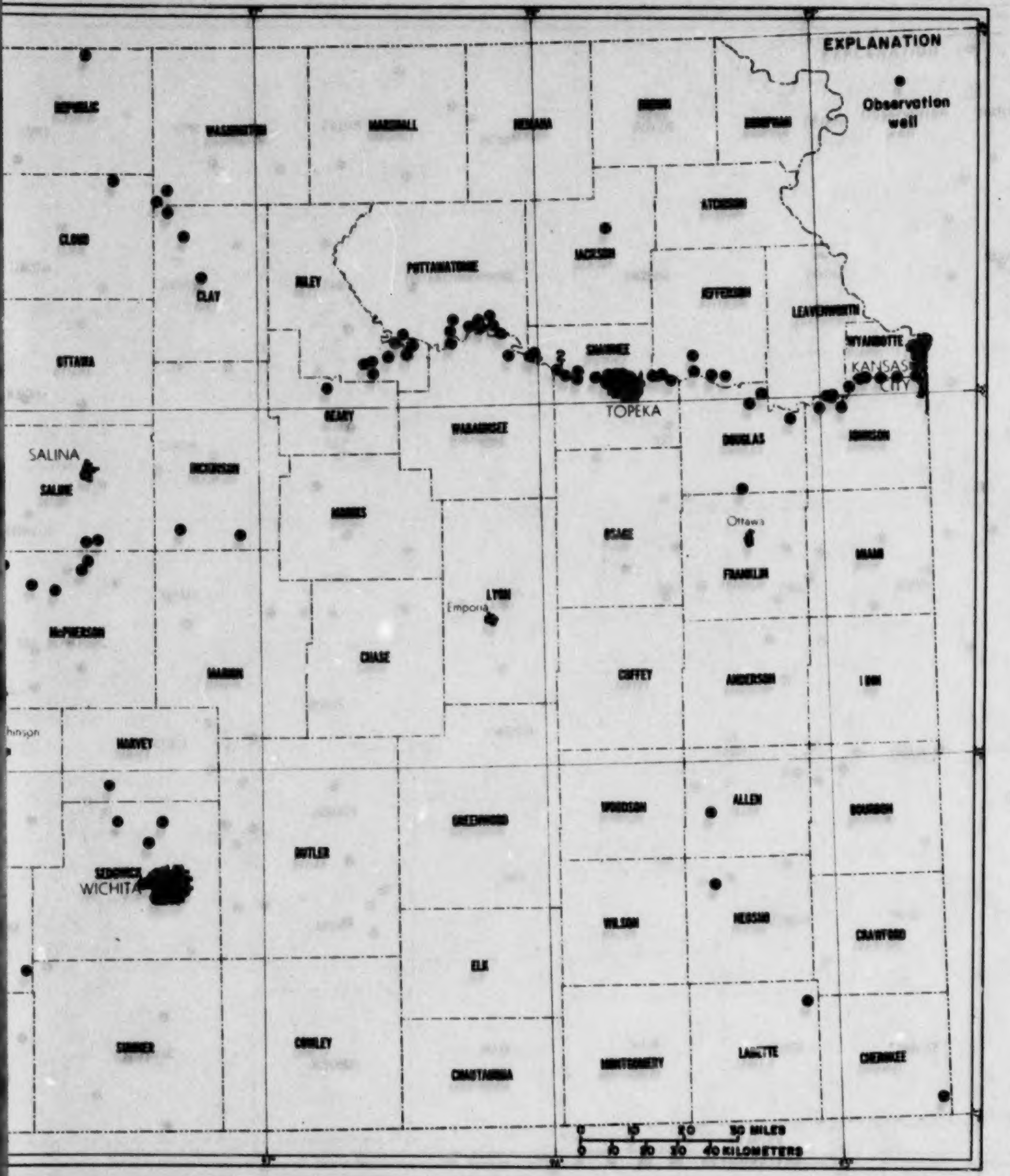
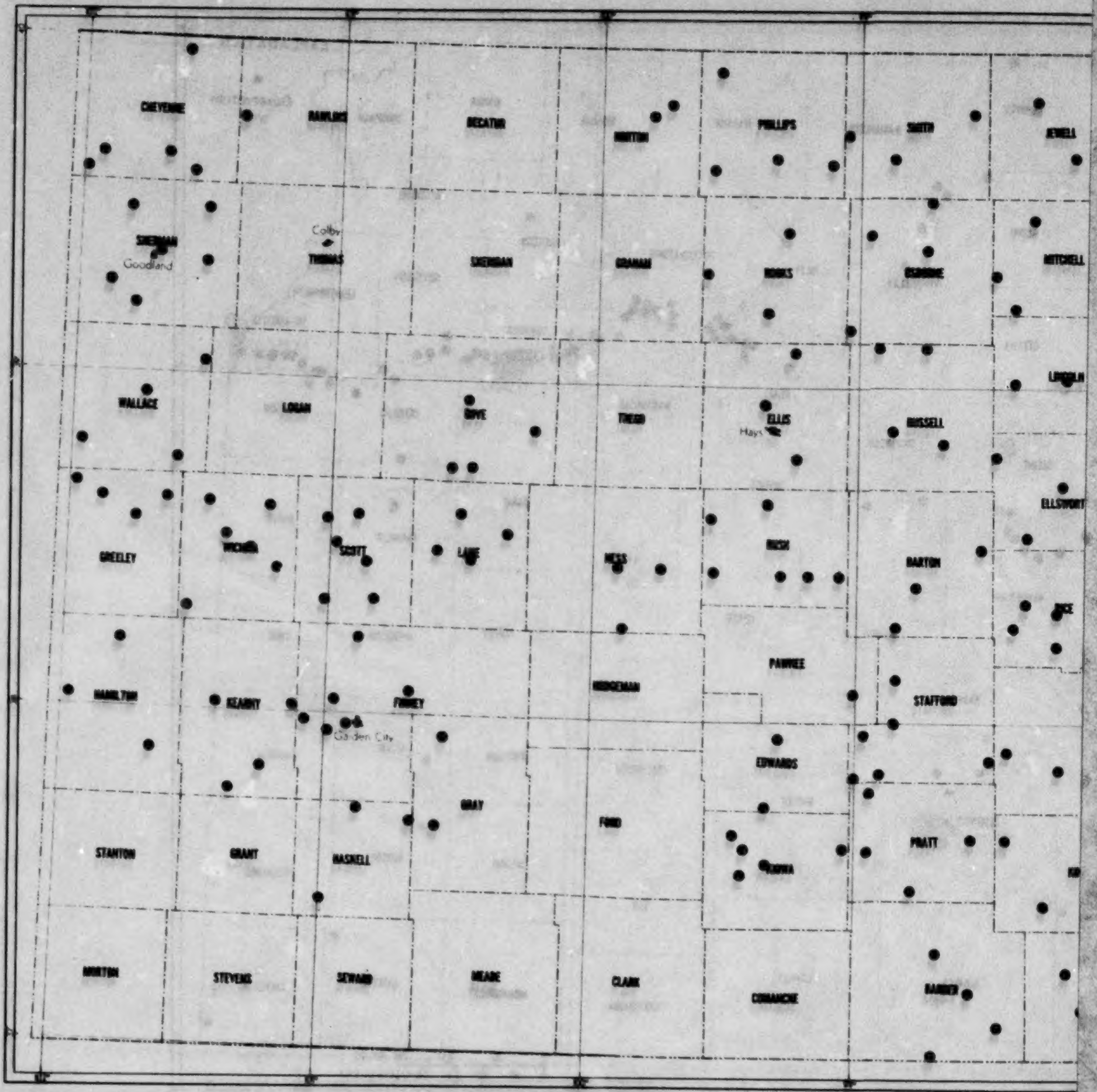


Figure 4.--Map of Kansas showing location of observation wells, 1977 water yea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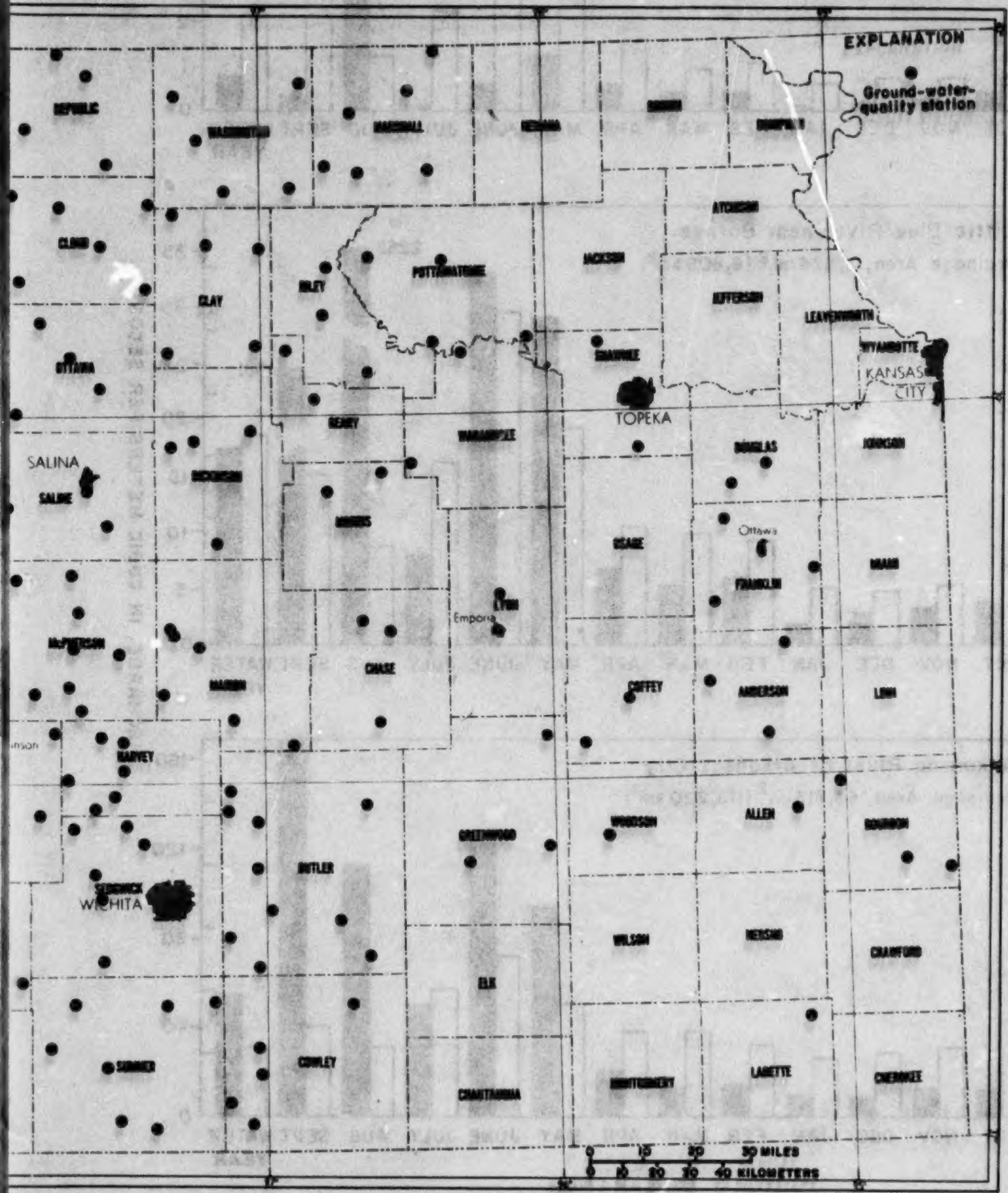

Figure 5.--Map of Kansas showing location of ground-water-quality stations, 1977 water year.

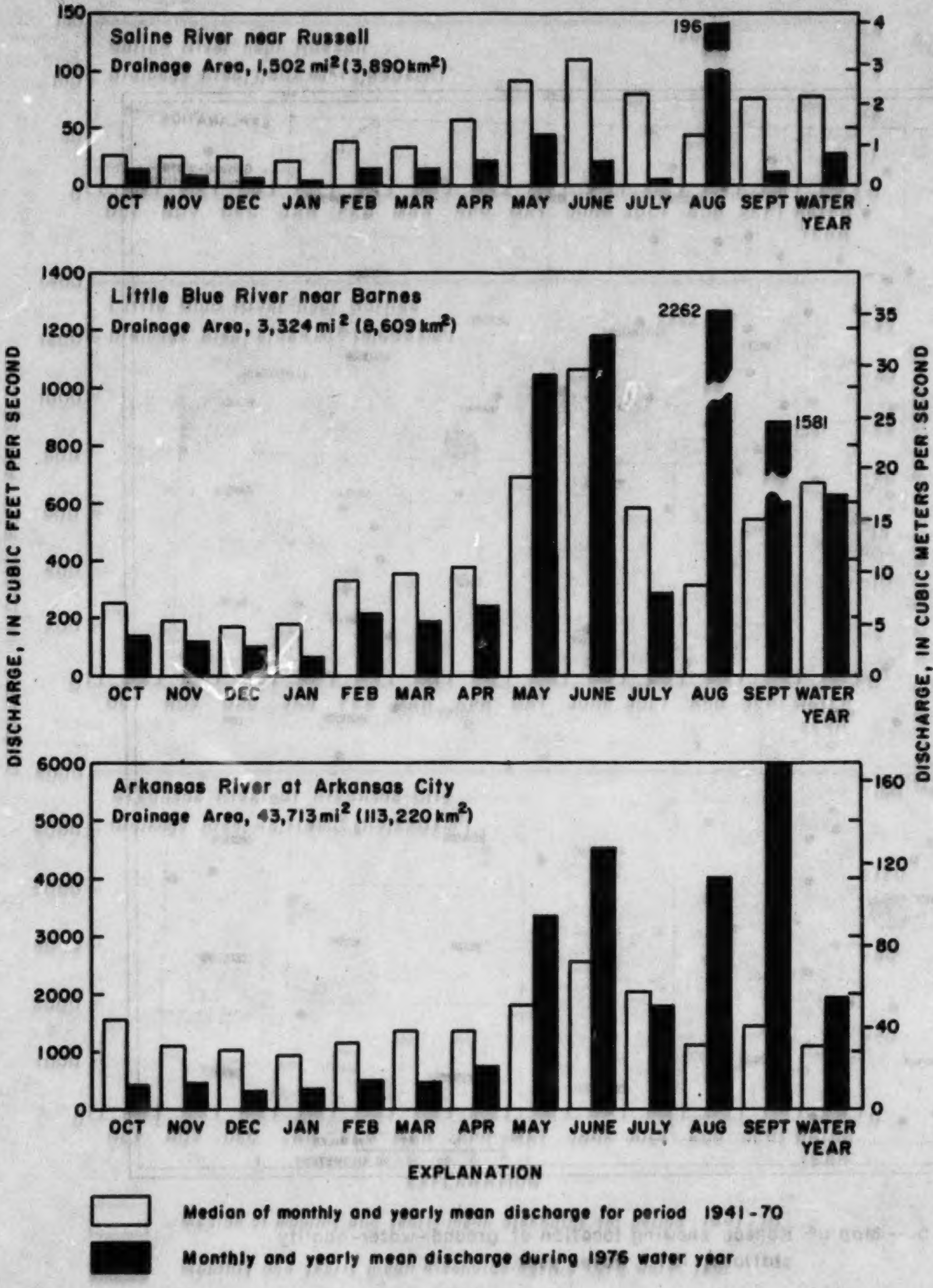

Figure 6.--Discharge during 1977 water year compared with median discharge for period 1941-70 for three representative gaging stations.

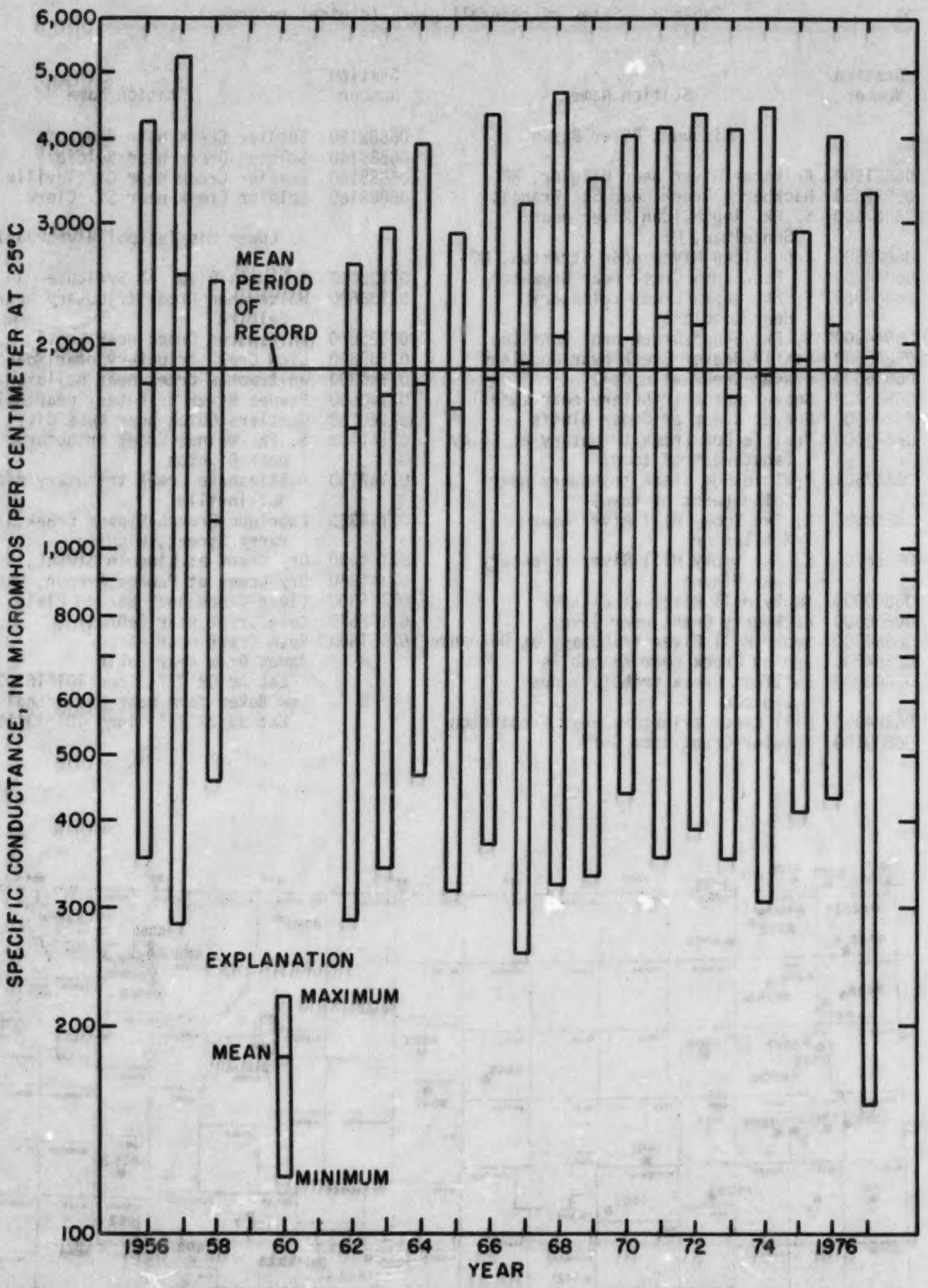

Figure 7.-- Yearly maximums, minimums, means, and mean for period of record of specific conductance from Smoky Hill River at Enterprise.

Table 3.--Sites of rainfall gages (digital recorder).

Station Number	Station Name
	Missouri River Basin
06821500	Arikaree River near Haigler, NE
06827350	Hackberry Creek near St. Francis
06827500	S. Fk. Republican River near Benkelman, NE
06828500	Republican River near Stratton, NE
06844700	S. Fk. Sappa Creek near Brewster
06844800	S. Fk. Sappa Creek tributary near Goodland
06844900	S. Fk. Sappa Creek near Achilles
06845680	Little Beaver Creek near Goodland
06846000	Beaver Creek at Ludell
06846200	Beaver Creek tributary near Ludell
06846500	Beaver Creek at Cedar Bluffs
06847600	Prairie Dog Creek tributary at Colby (southwest of town)
06847601	Prairie Dog Creek tributary near Colby (east of town)
06858500	N. Fk. Smoky Hill River near McAllaster
06858700	N. Fk. Smoky Hill River tributary near Winona
06860000	Smoky Hill River at Elkader
06860500	Hackberry Creek near Gove
06864300	Smoky Hill River tributary at Dorrance
06864700	Spring Creek near Kanopolis
06868900	Bullfoot Creek tributary near Lincoln
06884300	Mill Creek tributary near Washington
06889100	Soldier Creek near Goff
06889120	Soldier Creek near Bancroft
06889140	Soldier Creek near Soldier
06889160	Soldier Creek near Circleville
06889180	Soldier Creek near St. Clere
	Lower Mississippi River Basin
07138000	Arkansas River at Syracuse
07138600	Whitewoman Creek tributary near Selkirk
07138650	Whitewoman Creek near Leoti
07138800	Lion Creek tributary near Modoc
07140300	Whitewoman Creek near Bellefont
07140600	Pawnee River tributary near Kalvesta
07140700	Guzzlers Gulch near Ness City
07141400	S. Fk. Walnut Creek tributary near Dighton
07142100	Rattlesnake Creek tributary near Mullinville
07144323	Fabrique Branch Gypsum Creek, at Harry Street, Wichita
07144330	Dry Creek at Lincoln Street, Wichita
07144340	Dry Creek at Pawnee Avenue, Wichita
07145300	Clear Creek near Garden Plain
07146570	Cole Creek near DeGraff
07151600	Rush Creek near Harper
A	James Draw near Lakin Lat 38°09'27", long 101°16'03"
B	Lew Baker farm near Marienthal Lat 38°32'24", long 101°13'12"

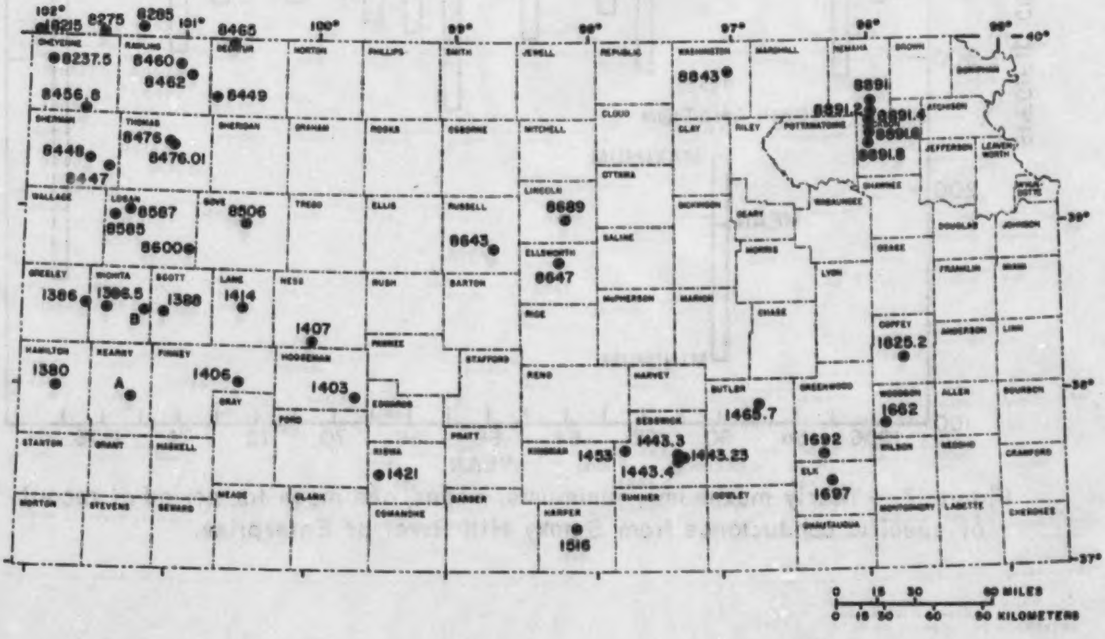

Figure 9.--Map of Kansas showing location of recording rainfall stations, 1977 water year.

MISSOURI RIVER BASIN

BIG NEMAHA RIVER BASIN

06814000 TURKEY CREEK NEAR SENECA, KS

LOCATION.--Lat 39°56'52", long 96°06'30", in SW¼NW¼SW¼ sec.20, T.1 S., R.12 E., Nemaha County, Hydrologic Unit 10240007, at downstream side of highway bridge, 2.0 mi (3.2 km) downstream from Clear Creek, 5.0 mi (8.0 km) upstream from Big Nemaha River, and 8.0 mi (12.9 km) northwest of Seneca.

DRAINAGE AREA.--276 mi² (715 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Altitude of gage is 1,160 ft (354 m), from topographic map. Prior to Oct. 19, 1956, water-stage recorder (occasional operation only) and nonrecording gage on former channel 400 ft (120 m) south of present site at present datum. Oct. 19, 1956, to June 15, 1957, nonrecording gage at highway bridge 1.2 mi (1.9 km) upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

REMARKS.--Records good except those for December through March, which are poor.

AVERAGE DISCHARGE.--29 years, 119 ft³/s (3.370 m³/s), 86,220 acre-ft/yr (106 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s (606 m³/s) Oct. 11, 1973, gage height, 24.77 ft (7.550 m); no flow at times in 1956-57, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,100 ft³/s (87.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Sept. 2	2300	4,270	121	19.96	6.084
Sept. 12	1300	* 9,820	278	22.94	6.992

Minimum discharge, no flow July 26-28, 30, 31, Aug. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	4.7	4.5	2.8	3.2	6.0	6.8	3.4	9.7	.17	.00	800
2	11	4.4	4.7	3.1	3.7	6.5	8.0	3.7	5.0	.23	.00	1480
3	11	4.3	5.0	3.2	4.0	7.5	8.5	4.1	2.7	.32	.00	3230
4	10	3.3	5.0	3.5	4.5	8.5	12	4.2	1.9	.18	.04	585
5	9.0	2.9	4.5	3.4	4.0	8.0	17	3.8	1.3	.15	.02	625
6	6.2	3.1	4.2	3.3	3.5	7.0	14	3.8	1.1	.13	1.5	197
7	3.8	4.3	4.0	3.1	3.0	8.0	10	4.0	.83	.14	4.1	105
8	2.9	3.7	3.7	3.1	3.5	10	8.4	2.7	.74	.15	1.3	74
9	3.4	4.1	4.3	3.0	4.5	11	8.1	2.9	.53	.70	.66	59
10	2.7	4.8	4.0	2.8	6.0	11	6.4	2.7	.61	1.4	15	53
11	2.5	3.9	3.8	2.7	7.0	11	4.8	2.6	.53	10	104	46
12	2.5	3.2	3.8	3.0	7.5	15	4.8	2.3	.43	12	53	5610
13	2.5	4.0	4.0	3.5	8.0	15	5.2	2.0	.37	1.9	13	2760
14	2.5	3.4	4.5	3.2	7.0	11	5.3	1.8	.53	.59	5.6	274
15	2.5	8.0	4.8	3.0	6.0	8.4	5.7	1.7	.34	.22	274	165
16	2.2	4.8	5.0	2.8	5.6	6.6	5.4	1.5	.31	.12	527	137
17	2.5	5.7	5.5	3.0	5.2	6.0	5.5	1.6	.80	.09	504	114
18	3.0	6.3	5.5	3.5	6.0	5.1	5.3	1.5	.71	.05	65	90
19	3.9	5.9	5.0	4.5	6.5	5.2	5.8	2.4	.40	.06	32	74
20	4.1	5.7	4.5	4.3	7.0	5.3	5.3	3.3	.60	.04	20	65
21	4.3	5.7	4.0	4.3	7.5	5.3	5.4	4.5	.40	.02	90	242
22	4.4	4.3	4.3	4.5	8.0	5.4	5.0	3.8	17	.02	145	98
23	5.9	4.6	4.5	5.0	8.4	5.2	5.0	2.6	5.8	.02	34	62
24	3.6	4.9	4.7	5.0	8.0	4.8	4.0	2.7	2.4	.02	18	118
25	3.7	5.3	4.5	4.5	7.6	5.0	3.8	2.1	19	.02	10	70
26	4.1	5.4	4.7	5.0	7.2	4.7	3.1	2.2	5.5	.00	9.5	48
27	3.2	5.2	5.0	4.5	6.5	4.6	3.1	7.7	1.5	.00	6.8	41
28	3.3	5.0	4.5	4.0	6.0	12	3.0	75	.70	.00	1630	36
29	3.8	4.6	4.0	3.8	---	17	2.9	71	.45	.01	339	36
30	6.0	4.5	3.5	3.6	---	13	2.7	30	.30	.00	82	35
31	4.7	---	3.0	3.0	---	8.6	---	19	---	.00	148	---
TOTAL	148.2	140.0	137.0	112.0	164.9	257.7	190.3	276.6	82.48	28.75	4132.52	17329
MEAN	4.78	4.67	4.42	3.61	5.89	8.31	6.34	8.92	2.75	.93	133	578
MAX	13	8.0	5.5	5.0	8.4	17	17	75	19	12	1630	5610
MIN	2.2	2.9	3.0	2.7	3.0	4.6	2.7	1.5	.30	.00	.00	35
AC-FT	294	278	272	222	327	511	377	549	164	57	8200	34370

CAL YR 1976 TOTAL 27052.30 MEAN 73.9 MAX 2880 MIN 1.6 AC-FT 53660
WTR YR 1977 TOTAL 22999.45 MEAN 63.0 MAX 5610 MIN .0 AC-FT 45620

06818000 MISSOURI RIVER AT ST. JOSEPH, MO

LOCATION.--Lat 39°45'12", long 94°51'28" in NW¼SW¼ sec.17, T.57 N., R.35 W., Buchanan County, Hydrologic Unit 10240011, on left bank at left abutment of St. Joseph & Grand Island Railroad bridge in St. Joseph. River mile, 448.2 (721.2 km).

DRAINAGE AREA.--420,300 mi² (1,089,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year. Gage-height records collected in vicinity 1873-99 are contained in reports of Missouri River Commission; since 1900 in reports of National Weather Service.

REVISED RECORDS.--WRD MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 788.19 ft (240.240 m) above mean sea level. Prior to Oct. 21, 1931, nonrecording gage and Oct. 21, 1931, to Dec. 31, 1933, water-stage recorder at same site at datum 5.50 ft (1.676 m) higher.

REMARKS.--Records good except during periods of ice effect, which are poor. Discharge measurements made weekly except during ice-flow periods. Some regulation from many upstream reservoirs.

AVERAGE DISCHARGE.--49 years, 38,910 ft³/s (1,102 m³/s), 28,190,000 acre-ft/yr (34,760 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 397,000 ft³/s (11,240 m³/s) Apr. 22, 23, 1952, gage height, 26.82 ft (8.175 m); minimum, 2,300 ft³/s (65.1 m³/s) Jan. 9, 1937; minimum gage height, 0.00 ft (0.000 m) Dec. 18, 19, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 27.2 ft (8.29 m), present datum, Apr. 29, 1881, discharge, about 370,000 ft³/s (10,500 m³/s), computed by Corps of Engineers.

Flood of June 1844 reached a stage of 24.5 ft (7.47 m), discharge, about 370,000 ft³/s (9,910 m³/s), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 115,000 ft³/s (3,260 m³/s) Sept. 3, gage height, 19.14 ft (5.834 m); minimum daily discharge, 14,000 ft³/s (396 m³/s) Feb. 1; minimum gage height, 5.32 ft (1.622 m) Jan. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43200	41000	38000	23900	14000	26600	43400	40300	48300	39000	39600	97200
2	42900	41300	38200	23500	15000	25800	41800	40200	46500	38300	39800	85300
3	42700	41600	39300	24000	16000	25200	42100	40200	45500	37600	40300	107000
4	43400	41400	41800	23200	18000	25700	44700	40800	44600	37300	41000	108000
5	44000	41800	41800	23500	19000	25300	45200	40800	41600	37500	42100	111000
6	43500	42000	39800	24000	20000	24800	44800	42900	40400	38200	44300	85600
7	43300	41900	36600	24500	20000	25700	43400	41900	38900	38700	43000	62300
8	43000	41600	34600	24000	20000	25500	41800	41000	38400	39000	41600	52800
9	42500	41500	32100	23000	21000	25200	41200	43200	38100	39800	42400	49100
10	41600	42100	30500	23000	21000	25600	40000	42500	38400	40700	61900	47100
11	41400	42400	29800	22500	21000	26400	39600	40100	38800	42500	53700	45600
12	40900	42200	29500	22000	22000	28100	39000	39600	39100	41600	48500	64200
13	40600	42800	29600	22000	23000	29800	38300	38900	40300	40400	44300	104000
14	39300	43300	29300	23000	24000	30000	39300	38500	41600	41000	42600	69000
15	42000	42400	29500	22000	25000	31600	39900	37900	41000	39800	44300	50300
16	42900	41200	29300	22500	26000	32900	40900	37600	40700	40100	52900	48300
17	42700	42300	28700	23000	28000	31200	40300	37300	40200	40300	64300	45400
18	42900	41800	28300	21000	28000	31900	41300	37700	40400	40600	51400	51100
19	43100	41000	27800	20000	28000	32700	42600	40900	41800	41400	47000	49600
20	42700	41800	26900	19000	28000	33700	41400	50200	42800	39300	44300	45800
21	43100	42400	26900	19000	28000	33400	41800	42700	43500	38300	41700	43500
22	42800	42600	26900	21000	29000	36200	42500	43200	41900	39900	42500	42900
23	42600	42000	26100	21500	29700	40600	42100	45700	39900	44200	43600	41800
24	42400	41500	25700	20000	29700	40700	44000	50700	39700	42800	42100	53100
25	42700	41300	26900	20000	29600	38900	42900	51000	43100	40700	40500	51500
26	42700	40400	27200	20000	29300	40100	41900	46900	45000	44500	40300	44800
27	42000	41000	26200	19000	29000	42200	41600	44800	39500	41000	40300	42700
28	41200	41000	26600	18000	27700	41500	41500	46800	38400	40000	52800	41500
29	41700	40600	26300	17000	---	43000	41900	55900	38500	41700	61700	40900
30	41500	39500	25800	16000	---	44200	40900	62200	38800	41600	46500	40300
31	41000	---	25200	15000	---	44300	---	53400	---	39200	40500	---
TOTAL	1313100	1250500	952000	660100	669000	1008800	1251700	1355800	1235700	1247000	1429800	1821700
MEAN	42360	41680	30710	21290	23890	32540	41720	43740	41190	40230	46120	60720
MAX	44000	43300	41800	24500	29700	44300	45200	62200	48300	44500	64300	111000
MIN	39300	39500	25200	15000	14000	24800	38300	37300	38100	37300	39600	40300
AC-FT	2605000	2480000	1888000	1309000	1327000	2001000	2483000	2689000	2451000	2473000	2836000	3613000

CAL YR 1976 TOTAL 15523000 MEAN 42410 MAX 89700 MIN 17000 AC-FT 30790000
WTR YR 1977 TOTAL 14196200 MEAN 38890 MAX 111000 MIN 14000 AC-FT 28160000

06844700 SOUTH FORK SAPPA CREEK NEAR BREWSTER, KS

LOCATION.--Lat 39°17'07", long 101°27'56", in NW¼NW¼SW¼ sec.9, T.9 S., R.37 W., Sherman County, Hydrologic Unit 10250010, on left bank at highway bridge, 9.0 mi (14.5 km) southwest of Brewster.

DRAINAGE AREA.--74.0 mi² (191.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,440 ft (1,049 m), from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--10 years, 0.218 ft³/s (0.006 m³/s), 158 acre-ft/yr (0.195 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 875 ft³/s (24.8 m³/s) July 31, 1975, gage height, 7.15 ft (2.179 m); no flow most days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6.0 ft³/s (0.17 m³/s) May 21, gage height, 2.55 ft (0.777 m); no peak above base of 75 ft³/s (2.12 m³/s); no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	2.9	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.10
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	3.01	.00	.00	.01	.10
MEAN	.000	.000	.000	.000	.000	.000	.000	.097	.000	.000	.000	.003
MAX	.00	.00	.00	.00	.00	.00	.00	2.9	.00	.00	.01	.10
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	6.0	.00	.00	.02	.2

CAL YR 1976 TOTAL 132.58 MEAN .36 MAX 116 MIN .00 AC-FT 263
WTR YR 1977 TOTAL 3.12 MEAN .009 MAX 2.9 MIN .00 AC-FT 6

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

06844900 SOUTH FORK SAPPA CREEK NEAR ACHILLES, KS

LOCATION.--Lat 39°40'37", long 100°43'18", in SW¼SW¼NW¼ sec.29, T.4 S., R.30 W., Decatur County, Hydrologic Unit 10250010, on right bank at downstream side of highway bridge, 5.5 mi (8.8 km) southeast of Achilles, 14 mi (23 km) southwest of Oberlin, and 18.5 mi (29.8 km) upstream from confluence with North Fork.

DRAINAGE AREA.--446 mi^2 (1,155 km^2), of which 68 mi^2 (176 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,722.42 ft (829.794 m) above mean sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--18 years, 5.06 ft^3/s (0.143 m^3/s), 3,670 acre-ft/yr (4.53 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,310 ft^3/s (150 m^3/s) June 19, 1975, gage height, 10.47 ft (3.191 m), from rating curve extended above 3,000 ft^3/s (85.0 m^3/s); no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft^3/s (2.83 m^3/s) and maximum (*):

Date	Time		Discharge		Gage height	
			(ft^3/s)	(m^3/s)	(ft)	(m)
May 21	2100	*	590	16.7	9.50	2.896
June 14	1600		250	7.08	8.60	2.621

Minimum discharge, no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	2.0	.52	.02	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	1.4	.48	.02	6.9
3	.00	.00	.00	.00	.00	.00	.00	.00	1.6	.44	.02	.31
4	.00	.00	.00	.00	.00	.00	.00	.00	5.2	.36	.02	.04
5	.00	.00	.00	.00	.00	.00	.00	.00	6.1	.30	.02	3.2
6	.00	.00	.00	.00	.00	.00	.00	.00	2.4	.22	.02	37
7	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.05	.02	10
8	.00	.00	.00	.00	.00	.00	.00	.00	.64	.05	.02	2.8
9	.00	.00	.00	.00	.00	.00	.00	.00	.52	.04	.02	.60
10	.00	.00	.00	.00	.00	.00	.00	.00	.26	.04	.01	.22
11	.00	.00	.00	.00	.00	.00	.00	.00	.22	.04	.02	.04
12	.00	.00	.00	.00	.00	.00	.00	.00	.48	.04	.00	.04
13	.00	.00	.00	.00	.00	.00	.00	.00	3.7	.04	.00	.04
14	.00	.00	.00	.00	.00	.00	.00	.00	134	.02	.01	.03
15	.00	.00	.00	.00	.00	.00	.00	.00	48	.02	.00	.03
16	.00	.00	.00	.00	.00	.00	.00	.00	11	.00	.02	.03
17	.00	.00	.00	.00	.00	.00	.00	.00	5.7	.00	.01	.03
18	.00	.00	.00	.00	.00	.00	.00	.00	3.9	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	3.7	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	2.8	2.6	.00	.02	.00
21	.00	.00	.00	.00	.00	.00	.00	224	2.0	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	397	1.9	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	72	1.6	.00	.02	.00
24	.00	.00	.00	.00	.00	.00	.00	26	1.8	.00	.02	.00
25	.00	.00	.00	.00	.00	.00	.00	16	1.0	16	.26	.00
26	.00	.00	.00	.00	.00	.00	.00	12	.90	1.7	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	9.2	.72	.05	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	6.3	.56	.04	.00	.00
29	.00	.00	.00	.00	---	.00	.00	4.5	.52	.04	.00	.00
30	.00	.00	.00	.00	---	.00	.00	3.4	.48	.03	.00	.00
31	.00	---	.00	.00	---	.00	---	2.4	---	.03	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	775.60	245.90	20.55	.57	61.31
MEAN	.000	.000	.000	.000	.000	.000	.000	25.0	8.20	.66	.018	2.04
MAX	.00	.00	.00	.00	.00	.00	.00	397	134	16	.26	37
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.22	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	1540	488	41	1.1	122

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CAL YR 1976  TOTAL    92.32   MEAN  .25   MAX    1.2   MIN  .00   AC-FT   183
WTR YR 1977  TOTAL  1103.93   MEAN 3.02   MAX    397   MIN  .00   AC-FT  2190
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06846500 BEAVER CREEK AT CEDAR BLUFFS, KS

LOCATION.--Lat 39°59'06", long 100°33'35", in NW¼NE¼ sec.10, T.1 S., R.29 W., Decatur County, Hydrologic Unit 10250014, on right bank at downstream side of bridge on U.S. Highway 83, 0.2 mi (0.3 km) north of Cedar Bluffs, 1.0 mi (1.6 km) south of Kansas-Nebraska state line, and at mile 107.4 (172.8 km).

DRAINAGE AREA.--1,610 mi^2 (4,191 km^2), of which 294 mi^2 (761 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1510: 1947, 1950-51.

GAGE.--Water-stage recorder. Datum of gage is 2,520.33 ft (768.197 m) above mean sea level. Prior to Aug. 19, 1971, at site 0.1 mi (0.2 km) upstream at same datum. Aug. 19, 1971, to July 12, 1972, at site 0.8 mi (1.3 km) downstream at datum 5.00 ft (1.524 m) lower.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--32 years, 20.6 ft^3/s (0.583 m^3/s), 14,920 acre-ft/yr (18.4 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,940 ft^3/s (225 m^3/s) June 11, 1960, gage height, 18.71 ft (5.703 m); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1944 reached a stage of 18.16 ft (5.535 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 330 ft^3/s (9.35 m^3/s) Sept. 2, gage height, 8.62 ft (2.627 m); no other peak above base of 300 ft^3/s (8.50 m^3/s); no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.58
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	267
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	290
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	202
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	90
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	45
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	20
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	11
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.3
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.6
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.2
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.4
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.36
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.20
16	.00	.00	.00	.00	.00	.00	.00	.00	.42	.00	.00	.15
17	.00	.00	.00	.00	.00	.00	.00	.00	1.7	.00	.00	.12
18	.00	.00	.00	.00	.00	.00	.00	.00	.42	.00	.00	.06
19	.00	.00	.00	.00	.00	.00	.00	.00	.18	.00	.00	.03
20	.00	.00	.00	.00	.00	.00	.00	.04	.02	.00	.00	.01
21	.00	.00	.00	.00	.00	.00	.00	31	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	45	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	25	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	5.5	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	1.4	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.48	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.22	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.12	.00	.50	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.03	.00	.18	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	108.79	2.74	.68	.00	944.01
MEAN	.000	.000	.000	.000	.000	.000	.000	3.51	.091	.022	.000	31.5
MAX	.00	.00	.00	.00	.00	.00	.00	45	1.7	.50	.00	290
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	216	5.4	1.3	.00	1870

CAL YR 1976 TOTAL 306.89 MEAN .84 MAX 117 MIN .00 AC-FT 609
WTR YR 1977 TOTAL 1056.22 MEAN 2.89 MAX 290 MIN .00 AC-FT 2100

06846500 BEAVER CREEK AT CEDAR BLUFFS, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1961 to September 1965, October 1967 to September 1969.
SUSPENDED-SEDIMENT DISCHARGE: October 1961 to September 1966, October 1967 to September 1969.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
MAY					
22...	1450	62	200	1200	201
24...	1055	5.6	255	405	6.1
SEP					
02...	1845	330	320	3890	3470

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM
MAY							
22...	1450	62	1200	85	98	99	100
SEP							
02...	1845	330	3890	68	82	98	100

06847900 PRAIRIE DOG CREEK ABOVE NORTON RESERVOIR, KS

LOCATION.--Lat 39°46'13", long 100°06'00", in SE¼SE¼ sec.23, T.3 S., R.25 W., Norton County, Hydrologic Unit 10250015, on right bank, 50 ft (15 m) downstream from bridge on county road, 4 mi (6.4 km) east of Clayton, and at mile 90.4 (145.5 km).

DRAINAGE AREA.--590 mi² (1,528 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1962 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,334.94 ft (711.690 m) above mean sea level. Prior to Sept. 30, 1974, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good, except those for winter periods, which are poor. Diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 12.2 ft³/s (0.346 m³/s), 8,840 acre-ft/yr (10.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s (251 m³/s) Sept. 6, 1972, gage height, 14.81 ft (4.514 m), present datum, from rating curve extended above 3,500 ft³/s (99.1 m³/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known since at least 1944, 65,500 ft³/s (1,850 m³/s) May 28, 1953, at site 9.4 mi (15.1 km) downstream, based on contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft³/s (45.0 m³/s) Aug. 24, gage height, 13.15 ft (4.008 m), no other peak above base of 700 ft³/s (19.8 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.03	.02	.00	.24	.53	1.6	21	1.3	2.2	33
2	.00	.00	.06	.02	.00	.25	.68	1.8	12	1.1	1.9	160
3	.00	.00	.07	.02	.00	.27	.91	2.7	9.0	.88	.74	92
4	.00	.00	.08	.02	.03	.27	1.3	1.8	7.7	.59	.47	27
5	.00	.00	.08	.02	.04	.25	1.4	1.5	7.6	.28	.27	17
6	.00	.00	.08	.02	.05	.24	1.2	1.3	6.3	.19	.23	13
7	.00	.00	.08	.02	.05	.28	1.1	1.1	5.7	.14	.16	11
8	.00	.00	.08	.02	.05	.32	.82	1.1	5.6	.11	.09	9.9
9	.00	.00	.07	.03	.06	.31	.78	1.1	4.9	.10	.07	8.6
10	.00	.00	.08	.02	.14	.46	.70	1.0	4.5	.10	.06	7.7
11	.00	.00	.06	.02	.15	.59	.66	1.4	3.9	.08	.06	7.6
12	.00	.00	.07	.02	.16	.43	4.5	1.0	3.8	.08	.07	7.6
13	.00	.00	.07	.00	.19	.60	11	.93	4.1	.05	.06	7.1
14	.00	.00	.07	.00	.19	.70	1.4	.99	140	.01	.04	6.5
15	.00	.00	.07	.00	.18	.65	1.2	40	30	.06	.05	6.2
16	.00	.00	.07	.00	.18	.48	2.7	135	12	.06	.43	6.2
17	.00	.00	.08	.00	.20	.39	2.6	28	7.9	.01	13	6.2
18	.00	.00	.08	.00	.22	.36	1.5	14	6.2	.00	6.6	5.6
19	.00	.00	.10	.00	.21	.59	4.8	9.8	5.4	.00	2.3	4.9
20	.00	.02	.07	.00	.21	1.5	8.7	7.6	5.6	.00	.87	4.9
21	.00	.03	.04	.00	.22	1.5	5.6	14	6.0	.00	.28	4.9
22	.00	.03	.05	.00	.28	1.1	2.2	203	5.6	.00	.13	4.5
23	.00	.04	.06	.00	.49	.69	2.0	80	5.1	.00	2.5	4.4
24	.00	.04	.07	.00	.59	.64	1.8	26	4.2	.00	578	4.0
25	.00	.04	.08	.05	.35	.56	1.6	15	6.6	.77	944	4.5
26	.00	.05	.10	.74	.24	.53	1.6	44	17	176	294	4.7
27	.00	.05	.14	1.2	.24	.53	1.5	138	5.1	156	55	4.6
28	.00	.01	.14	.42	.24	.79	2.1	161	3.0	27	26	4.3
29	.00	.00	.12	.00	---	1.0	1.9	40	2.1	13	17	4.2
30	.00	.00	.10	.00	---	.76	1.5	21	1.8	6.6	14	4.2
31	.00	---	.03	.00	---	.56	---	26	---	3.8	103	---
TOTAL	.00	.31	2.38	2.66	4.96	17.84	70.28	1021.72	359.7	388.31	2063.58	486.3
MEAN	.000	.010	.077	.086	.18	.58	2.34	33.0	12.0	12.5	66.6	16.2
MAX	.00	.05	.14	1.2	.59	1.5	11	203	140	176	944	160
MIN	.00	.00	.03	.00	.00	.24	.53	.93	1.8	.00	.04	4.0
AC-FT	.00	.6	4.7	5.3	9.8	35	139	2030	713	770	4090	965

CAL YR 1976 TOTAL 1125.40 MEAN 3.07 MAX 144 MIN .00 AC-FT 2230
WTR YR 1977 TOTAL 4417.96 MEAN 12.1 MAX 944 MIN .00 AC-FT 8760

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-70, 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
JUN					
08...	1315	6.0	520	182	2.9
SEP					
01...	1140	30	250	1820	147

06847950 NORTON RESERVOIR NEAR NORTON, KS

LOCATION.--Lat 39°48'27", long 99°56'04", in SW¼NE¼ sec.8, T.3 S., R.23 W., Norton County, Hydrologic Unit 10250015, in control tower near left end of Norton Dam on Prairie Dog Creek, 3.0 mi (4.8 km) southwest of Norton, and at mile 74.9 (120.5 km). Water-quality sampling site at outlet to Norton water supply.

DRAINAGE AREA.--683 mi² (1,769 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by compacted earthfill dam; storage began Oct. 6, 1964. Total capacity, 193,023 acre-ft (238 hm³), consisting of the following: Sedimentation, 2,920 acre-ft (3.60 hm³) below elevation 2,275.5 ft (693.572 m); conservation pool, 33,010 acre-ft (40.7 hm³), between elevations 2,275.5 ft (693.572 m) and 2,304.3 ft (702.351 m); flood control pool, 98,800 acre-ft (122 hm³), between elevations 2,304.3 ft (702.351 m) and 2,331.4 ft (710.611 m); and surcharge pool, 58,280 acre-ft (71.9 hm³), between elevations 2,331.4 ft (710.611 m) and 2,341.0 ft (713.537 m). Reservoir is used for flood control and irrigation in Almena Unit, Missouri River Basin project. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 2,304.59 ft (702.439 m) June 27, 1967, contents, 36,570 acre-ft (45.1 hm³); minimum since conservation pool was first filled, 2,276.75 ft (693.953 m) Oct. 20-27, 1974, contents, 3,450 acre-ft (4.25 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,284.68 ft (696.370 m) Sept. 6-8, 13, contents, 8,250 acre-ft (10.2 hm³); minimum, 2,278.32 ft (694.432 m) Oct. 4-5, contents, 4,170 acre-ft (5.14 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey by U.S. Bureau of Reclamation in 1955, revised in 1965)

2,278	4,010	2,284	7,720
2,280	5,050	2,286	9,320
2,282	6,280		

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2278.34	2278.38	2278.45	2278.57	2278.71	2278.88	2279.30	2279.98	2282.93	2283.11	2279.23	2283.96
2	2278.34	2278.35	2278.45	2278.57	2278.71	2278.92	2279.33	2280.11	2282.97	2283.09	2279.03	2284.19
3	2278.35	2278.37	2278.45	2278.57	2278.71	2278.90	2279.37	2280.13	2283.00	2283.00	2278.85	2284.56
4	2278.32	2278.37	2278.45	2278.60	2278.72	2278.90	2279.37	2280.13	2283.02	2282.78	2278.65	2284.66
5	2278.32	2278.37	2278.48	2278.60	2278.73	2278.90	2279.40	2280.10	2283.02	2282.52	2278.43	2284.67
6	2278.35	2278.37	2278.47	2278.60	2278.73	2278.90	2279.41	2280.11	2282.99	2282.27	2278.23	2284.68
7	2278.37	2278.37	2278.48	2278.61	2278.74	2278.93	2279.41	2280.11	2282.99	2282.03	2278.00	2284.68
8	2278.38	2278.37	2278.48	2278.63	2278.74	2278.93	2279.41	2280.13	2282.98	2281.79	2277.91	2284.68
9	2278.38	2278.37	2278.48	2278.63	2278.78	2278.93	2279.43	2280.18	2282.96	2281.55	2277.91	2284.64
10	2278.38	2278.37	2278.48	2278.64	2278.78	2278.94	2279.43	2280.17	2282.95	2281.30	2277.87	2284.63
11	2278.38	2278.37	2278.50	2278.64	2278.78	2279.03	2279.41	2280.17	2282.92	2281.04	2277.89	2284.67
12	2278.38	2278.37	2278.50	2278.64	2278.79	2279.08	2279.43	2280.17	2282.92	2280.76	2277.89	2284.67
13	2278.38	2278.37	2278.52	2278.64	2278.81	2279.10	2279.43	2280.18	2282.92	2280.45	2277.85	2284.68
14	2278.35	2278.37	2278.52	2278.64	2278.82	2279.10	2279.48	2280.19	2283.04	2280.17	2277.85	2284.65
15	2278.35	2278.37	2278.53	2278.64	2278.82	2279.10	2279.51	2280.28	2283.21	2279.90	2277.88	2284.65
16	2278.35	2278.37	2278.53	2278.64	2278.83	2279.09	2279.58	2280.50	2283.22	2279.59	2278.03	2284.63
17	2278.35	2278.37	2278.54	2278.64	2278.83	2279.10	2279.60	2280.66	2283.22	2279.26	2278.03	2284.63
18	2278.35	2278.37	2278.55	2278.64	2278.84	2279.10	2279.62	2280.78	2283.21	2278.91	2278.10	2284.62
19	2278.33	2278.37	2278.55	2278.65	2278.83	2279.18	2279.68	2280.84	2283.20	2278.54	2278.13	2284.58
20	2278.33	2278.38	2278.56	2278.65	2278.83	2279.17	2279.79	2280.88	2283.15	2278.20	2278.13	2284.57
21	2278.34	2278.40	2278.56	2278.65	2278.85	2279.18	2279.84	2281.05	2283.16	2277.96	2278.12	2284.58
22	2278.34	2278.40	2278.56	2278.66	2278.88	2279.18	2279.85	2281.11	2283.14	2277.96	2278.11	2284.55
23	2278.34	2278.38	2278.56	2278.66	2278.90	2279.20	2279.87	2281.50	2283.12	2277.96	2278.13	2284.53
24	2278.34	2278.38	2278.58	2278.66	2278.89	2279.20	2279.87	2281.73	2283.18	2278.00	2278.40	2284.51
25	2278.34	2278.43	2278.58	2278.68	2278.88	2279.21	2279.87	2281.83	2283.18	2278.06	2281.97	2284.50
26	2278.34	2278.43	2278.58	2278.69	2278.88	2279.21	2279.88	2281.88	2283.18	2278.08	2283.37	2284.48
27	2278.35	2278.43	2278.58	2278.71	2278.90	2279.21	2279.92	2282.07	2283.22	2279.00	2283.53	2284.45
28	2278.38	2278.43	2278.58	2278.71	2278.88	2279.33	2279.92	2282.57	2283.18	2279.19	2283.60	2284.42
29	2278.38	2278.43	2278.60	2278.71	---	2279.32	2279.95	2282.75	2283.18	2279.26	2283.64	2284.43
30	2278.38	2278.45	2278.57	2278.71	---	2279.27	2279.95	2282.83	2283.14	2279.29	2283.20	2284.42
31	2278.38	---	2278.57	2278.71	---	2279.28	---	2282.88	---	2279.31	2283.78	---
MEAN	2278.35	2278.39	2278.53	2278.64	2278.81	2279.09	2279.61	2280.90	2283.08	2280.14	2279.35	2284.55
MAX	2278.38	2278.45	2278.60	2278.71	2278.90	2279.33	2279.95	2282.88	2283.22	2283.11	2283.78	2284.68
MIN	2278.32	2278.35	2278.45	2278.57	2278.71	2278.88	2279.30	2279.98	2282.92	2277.96	2277.85	2283.96
(+)	4,200	4,240	4,290	4,360	4,450	4,660	5,020	6,900	7,080	4,670	7,550	8,040
(♦)	+20	+40	+50	+70	+90	+210	+360	+1,880	+180	-2,410	+2,880	+490

CAL YR 1976 .... (♦) -5,490
WTR YR 1977 .... (♦) +3,860

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
♦ CHANGE IN CONTENTS, IN ACRE-FEET.

06847950 NORTON RESERVOIR NEAR NORTON, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

REMARKS.--Samples are collected at outlet to Norton water supply.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
SEP									
01...	22.0	6.1	60	20	38	9.3	9.6	16	170

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
SEP									
01...	0	17	6.3	.3	.79	.12	70	187	.25

DATE	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
SEP									
01...	130	0	.4	340	7.7	6.1	180	B33	94

DATE	RESERVOIR STORAGE (AC-FT)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
OCT								
04...	4170	17.5	472	--	5.3	--	B3	26
FEB								
08...	4380	11.0	605	8.0	--	--	<1	130
APR								
26...	4980	15.0	570	7.4	7.7	--	B1	B5
JUN								
08...	6960	26.0	450	8.3	--	--	--	--
JUL								
19...	4200	28.0	590	8.3	5.4	--	--	--
SEP								
01...	7690	22.0	340	7.7	6.1	180	B33	94

B Results based on colony count outside the acceptable range (non-ideal colony count).

06848000 PRAIRIE DOG CREEK AT NORTON, KS

LOCATION.--Lat 39°48'36", long 99°55'18", in NW¼NW¼ sec.9, T.3 S., R.23 W., Norton County, Hydrologic Unit 10250015, 0.9 mi (1.4 km) downstream from Norton Dam, 2 mi (3.2 km) southwest of Norton, and at mile 74.0 (119.1 km).

DRAINAGE AREA.--684 mi² (1,772 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1944(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,237.38 ft (681.953 m) above mean sea level, levels by Bureau of Reclamation. Apr. 13 to May 7, 1944, nonrecording gage and May 8, 1944, to Sept. 30, 1961, water-stage recorder at site 3.2 mi (5.1 km) downstream at datum 19.47 ft (5.934 m) lower. Oct. 1, 1961, to Apr. 19, 1965, water-stage recorder at site 0.5 mi (0.8 km) upstream at datum 3.82 ft (1.164 m) lower. Apr. 20, 1965, to Sept. 30, 1974, water-stage recorder at same site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. Flow completely regulated since 1964 by Norton Dam (see sta 06847950).

AVERAGE DISCHARGE.--34 years, 27.8 ft³/s (0.787 m³/s), 20,140 acre-ft/yr (24.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,500 ft³/s (1,060 m³/s) May 28, 1953, gage height, 25.6 ft (7.80 m), site and datum then in use, from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of main channel velocity-area study and computation of peak flow over road; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 87 ft³/s (2.46 m³/s) July 10, gage height, 4.90 ft (1.494 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	UEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.05	.00	.00	.00	.07	.07	.09	.09	.00	18	.05
2	.02	.05	.00	.00	.00	.07	.09	.49	.05	.00	36	.07
3	.01	.05	.00	.00	.00	.07	.11	.38	.05	16	38	.09
4	.01	.60	.00	.00	.00	.07	.17	.20	.05	60	38	.07
5	.00	.17	.00	.00	.00	.07	.09	.09	.02	73	38	.07
6	.06	.09	.00	.00	.00	.07	.09	.07	.00	73	38	1.6
7	.17	.06	.00	.00	.00	.07	.06	.08	.00	72	37	.05
8	.37	.07	.00	.00	.00	.06	.07	.09	.00	72	11	.04
9	1.0	.04	.00	.00	.00	.07	.05	.21	.01	72	1.0	.00
10	1.0	.00	.00	.00	.00	.07	.05	.16	.00	78	.58	.00
11	.04	.01	.00	.00	.00	.12	.05	.11	.00	81	.44	.09
12	.02	.00	.01	.00	.00	.11	.05	.07	.00	79	.30	.19
13	.00	.00	.01	.00	.00	.11	.05	.05	.00	80	.19	.07
14	.00	.00	.01	.00	.01	.11	.05	.04	.00	80	.16	.04
15	.00	.00	.01	.00	.02	.09	.18	.13	.00	82	.50	.05
16	.00	.00	.01	.00	.04	.08	.19	.07	.00	80	.83	.05
17	.00	.02	.01	.00	.04	.07	.11	.07	5.6	78	.37	.07
18	.00	.01	.01	.00	.06	.05	.13	.09	9.9	77	1.0	.00
19	.00	.00	.01	.00	.08	.17	.11	.25	10	76	.16	.00
20	.01	.01	.00	.00	.08	.15	.43	.11	9.5	75	.11	.00
21	.01	.01	.00	.00	.08	.09	.24	.33	9.1	59	.11	.00
22	.01	.00	.00	.00	.09	.07	.15	.19	9.9	1.6	.25	.00
23	.01	.00	.00	.00	.09	.07	.09	.11	9.9	.42	.25	.00
24	.01	.01	.00	.00	.08	.07	.07	.09	6.8	.16	.19	.00
25	.01	.01	.00	.00	.07	.07	.05	.13	.28	.26	.07	.00
26	.01	.01	.00	.00	.07	.07	.05	.16	.11	.19	.01	.00
27	.03	.00	.00	.00	.07	.07	.05	.15	.05	.11	.00	.00
28	.03	.00	.01	.00	.07	.23	.04	.09	.04	.09	.00	.00
29	.03	.00	.01	.00	---	.18	.13	.07	.03	.06	.00	.00
30	.04	.00	.00	.00	---	.08	.16	.12	.01	.05	.01	.00
31	.05	---	.00	.00	---	.05	---	.11	---	.04	.04	---
TOTAL	2.97	1.27	.10	.00	.95	2.80	3.23	4.40	70.69	1365.98	260.57	2.60
MEAN	.096	.042	.003	.000	.034	.090	.11	.14	2.36	44.1	8.41	.087
MAX	1.0	.60	.01	.00	.09	.23	.43	.49	10	82	38	1.6
MIN	.00	.00	.00	.00	.00	.05	.04	.04	.00	.00	.00	.00
AC-FT	5.9	2.5	.2	.00	1.9	5.6	6.4	8.7	140	2710	517	5.2

CAL YR 1976 TOTAL 3661.80 MEAN 10.0 MAX 121 MIN .00 AC-FT 7260
WTR YR 1977 TOTAL 1715.56 MEAN 4.70 MAX 82 MIN .00 AC-FT 3400

06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS

LOCATION.--Lat 39°59'09", long 99°28'39", in NW¼NW¼ sec.9, T.1 S., R.19 W., Phillips County, Hydrologic Unit 10250015, on left bank at downstream side of bridge on U.S. Highway 383, 1 mi (1.6 km) south of Kansas-Nebraska state line, 2.5 mi (4.0 km) west of Woodruff, and at mile 26.5 (42.6 km).

DRAINAGE AREA.--1,007 mi² (2,608 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to September 1932, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,016.20 ft (614.537 m) above mean sea level. See WSP 1919 for history of changes prior to Oct. 7, 1965.

REMARKS.--Records fair except those for winter periods, which are poor. Flow regulated to some extent since 1964 by Norton Reservoir 48.4 mi (77.9 km) upstream (see sta 06847950) and by irrigation development above station.

AVERAGE DISCHARGE.--37 years (water years 1929-32, 1945-77), 39.7 ft³/s (1.124 m³/s), 28,760 acre-ft/yr (35.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) June 23, 1947, gage height, 21.04 ft (6.413 m), site and datum then in use, from rating curve extended above 6,500 ft³/s (184 m³/s) on basis of contracted-opening measurement of 11,300 ft³/s (320 m³/s); no flow at times in 1945, 1948, 1950, 1954-61, 1963-66, 1971, 1972, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharge above regulated base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 3	0600	492	13.9	8.92	2.719
Sept. 3	1800	* 4,580	130	23.48	7.157

Minimum discharge, 0.02 ft³/s (0.001 m³/s) Sept. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	.20	.45	.70	.40	23	14	1.5	2.5	.15	.05	.09
2	.17	.16	.48	.60	.37	21	17	3.3	2.2	.13	.08	243
3	.11	.12	.52	.50	.36	19	15	310	2.0	.12	.07	3290
4	.06	.14	.60	.45	.36	17	14	58	1.9	.09	.11	1700
5	.05	.12	.65	.40	.38	15	16	13	1.8	.04	102	139
6	.05	.12	.72	.36	.39	14	15	6.1	1.8	.04	27	60
7	.14	.11	.80	.34	.40	12	13	4.0	2.2	.03	3.1	31
8	.11	.10	.90	.31	.45	11	20	3.2	1.8	.03	.66	15
9	.11	.11	1.0	.28	.48	9.8	18	2.7	1.6	.04	.31	8.2
10	.11	.11	1.1	.27	.52	5.9	12	2.4	1.5	.15	.29	4.6
11	.06	.12	1.0	.25	.60	6.8	10	2.3	1.5	.06	.04	2.9
12	.18	.17	.92	.25	.70	6.3	12	2.2	1.9	2.1	.03	1.8
13	.16	.18	1.0	.25	.80	6.7	8.8	2.1	2.2	.26	.03	1.0
14	.17	.20	1.1	.25	1.1	11	.85	2.0	1.2	.06	.03	.51
15	.17	.42	1.3	.25	1.5	5.9	.25	2.0	2.3	2.6	.05	.10
16	.14	.42	1.4	.25	2.0	3.1	1.1	2.0	2.2	1.1	.97	.10
17	.14	.42	1.5	.25	2.5	2.2	1.7	1.8	1.6	.75	1.2	2.2
18	.16	.53	1.7	.27	3.0	1.8	1.9	2.0	1.2	.77	.57	8.1
19	.16	.52	1.6	.29	4.0	2.5	5.1	2.7	.39	1.3	.11	3.2
20	.42	.56	1.4	.31	5.0	3.0	17	3.2	.31	2.1	.05	1.1
21	.75	.58	1.3	.35	6.0	3.9	11	5.9	.13	4.1	.04	.20
22	.64	.63	1.2	.40	8.0	6.1	12	7.8	.41	4.2	.04	.06
23	.53	1.3	1.1	.43	11	7.1	13	10	.78	1.1	.07	.03
24	.68	1.5	1.2	.47	15	7.8	6.0	6.8	1.9	.46	.07	.03
25	3.3	1.6	1.3	.50	17	8.8	3.4	4.4	7.0	.11	14	.03
26	2.8	1.0	1.4	.56	20	9.6	2.2	3.0	3.5	.07	13	.02
27	1.6	.70	1.5	.60	22	9.5	1.5	3.0	6.1	.06	9.4	.03
28	.97	.50	1.4	.66	23	10	1.2	5.3	4.1	.05	4.4	.07
29	.86	.45	1.2	.58	---	11	1.3	4.9	2.6	.06	2.1	.11
30	.64	.45	.96	.50	---	12	1.4	3.8	.80	.05	.66	.14
31	.42	---	.80	.45	---	13	---	3.0	---	.03	.15	---
TOTAL	16.53	13.54	33.50	12.33	147.31	295.8	265.70	484.4	61.42	22.21	180.68	5512.62
MEAN	.53	.45	1.08	.40	5.26	9.54	8.86	15.6	2.05	.72	5.83	184
MAX	3.3	1.6	1.7	.70	23	23	20	310	7.0	4.2	102	3290
MIN	.05	.10	.45	.25	.36	1.8	.25	1.5	.13	.03	.03	.02
AC-FT	33	27	66	24	292	587	527	961	122	44	358	10930

CAL YR 1976 TOTAL 1741.90 MEAN 4.76 MAX 217 MIN .00 AC-FT 3460
WTR YR 1977 TOTAL 7046.04 MEAN 19.3 MAX 3290 MIN .02 AC-FT 13980

06853500 REPUBLICAN RIVER NEAR HARDY, NE

LOCATION.--Lat 40°00'01", long 97°54'55", in NEWNE¼ sec.6, T.1 S., R.5 W., in Kansas, Republic County, Hydrologic Unit 10250016, at downstream side of highway bridge, 1.2 mi (1.9 km) southwest of Hardy and at mile 141.2 (227.2 km).

DRAINAGE AREA.--22,401 mi² (58,019 km²), of which about 7,500 mi² (19,000 km²) does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1904 to September 1915 (no winter records), April 1931 to current year. Prior to May 1932, published as "at Bostwick". Records for June 1896 to November 1903 published as "near Superior" in 18th to 22nd Ann. Repts., inclusive, Pt. 4, and WSP 75, 84, and 99, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1905(M), 1907-9, 1912, 1914-15, 1931. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,501.46 ft (457.645 m) above mean sea level. Prior to May 19, 1932, nonrecording gage at site at Bostwick, 20 mi (32 km) upstream at different datum.

REMARKS.--Records good except those for winter periods, which are poor. Natural flow affected by irrigation development above station and by storage in six reservoirs in Colorado and Nebraska. Considerable regulation since 1952 by Harlan County Reservoir (see sta 06849000).

AVERAGE DISCHARGE.--46 years (1913-14, 1932-77), 606 ft³/s (17.16 m³/s), 439,000 acre-ft/yr (541 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 225,000 ft³/s (6,370 m³/s) June 2, 1935, gage height, 19.4 ft (5.9 m), based on records for stations upstream; no flow Aug. 9-19, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1896, that of June 2, 1935, and 17.00 ft (5.18 m) June 24, 1947, discharge, 100,000 ft³/s (2,800 m³/s), based on records for upstream stations.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,460 ft³/s (211 m³/s) Sept. 13, gage height, 11.83 ft (3.606 m); no other peaks above regulated base of 2,500 ft³/s (70.8 m³/s); minimum daily, 10 ft³/s (0.28 m³/s), Nov. 30, Dec. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	41	10	70	90	143	72	59	110	102	135	215
2	50	40	10	70	100	145	67	62	100	78	159	209
3	45	38	30	70	100	140	64	132	80	77	195	1430
4	53	40	70	70	100	146	72	118	70	80	239	1250
5	125	41	110	70	100	147	80	80	60	90	468	1230
6	68	43	150	70	100	142	72	114	48	80	1040	671
7	62	45	150	70	100	142	62	112	38	66	591	431
8	62	48	120	70	120	141	59	104	42	114	241	346
9	63	49	100	70	150	138	59	118	44	165	156	294
10	60	48	80	70	180	139	56	156	37	112	135	263
11	51	48	80	70	230	155	54	146	37	124	147	244
12	46	48	70	70	250	176	53	140	74	162	138	4050
13	42	45	70	70	280	164	62	122	112	146	119	6200
14	43	45	70	70	300	150	120	116	343	130	115	2080
15	43	45	70	70	270	142	104	106	318	120	118	827
16	44	48	80	70	250	135	94	102	170	212	467	550
17	45	55	80	60	230	133	94	100	200	287	320	440
18	47	60	80	60	230	129	94	104	197	266	167	380
19	49	58	80	60	234	118	102	120	120	185	156	332
20	52	56	80	60	189	115	110	144	102	134	131	306
21	53	54	70	60	174	118	201	108	116	94	743	293
22	55	52	70	80	166	108	593	322	1060	96	1110	271
23	51	53	70	90	164	84	290	250	522	112	709	258
24	45	50	80	90	161	98	152	150	270	118	377	237
25	44	50	80	90	155	74	110	100	194	124	298	224
26	42	51	80	90	152	70	90	90	144	182	270	213
27	43	50	80	90	149	64	78	90	122	262	353	204
28	42	45	80	80	145	74	72	100	106	267	522	197
29	42	20	70	80	---	88	64	110	82	225	340	192
30	45	10	70	80	---	90	61	120	84	196	264	196
31	42	---	70	80	---	77	---	130	---	151	232	---
TOTAL	1609	1376	2410	2270	4869	3793	3251	3905	5002	4557	10455	24033
MEAN	51.9	45.9	77.7	73.2	174	122	108	126	167	147	337	801
MAX	125	60	150	90	300	176	593	322	1060	287	1110	6200
MIN	42	10	10	60	90	64	53	59	37	66	115	192
AC-FT	3190	2730	4780	4500	9660	7520	6450	7750	9920	9040	20740	47670

CAL YR 1976 TOTAL 50782 MEAN 139 MAX 1360 MIN 10 AC-FT 100700
WTR YR 1977 TOTAL 67530 MEAN 185 MAX 6200 MIN 10 AC-FT 133900

06853800 WHITE ROCK CREEK NEAR BURR OAK, KS

LOCATION.--Lat 39°53'56", long 98°15'05", in NE¼NE¼ sec.7, T.2 S., R.8 W., Jewell County, Hydrologic Unit 10250016, on right bank 500 ft (152 m) upstream from highway bridge, 3.5 mi (5.6 km) northeast of Burr Oak, and at mile 35.4 (57.0 km).

DRAINAGE AREA.--227 mi² (588 km²).

WATER-DISCHAGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1955-57, October 1957 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,601.5 ft (488.14 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Records good except those for winter periods and period of no gage height record Aug. 7 to Sept. 13, which are poor.

AVERAGE DISCHARGE.--20 years, 25.2 ft³/s (0.714 m³/s), 18,260 acre-ft/yr (22.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft³/s (447 m³/s) Sept. 3, 1973, gage height, 25.06 ft (7.638 m), from floodmark; no flow at times in 1957-59, 1964, 1966, 1968, 1976, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1869, 32.6 ft (9.94 m) July 9, 1950, from floodmark 300 ft (91 m) downstream and information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 388 ft³/s (11.0 m³/s) July 8, gage height, 8.89 ft (2.711 m); no peak above base of 1,000 ft³/s (28.3 m³/s); no flow July 21 to Aug. 3, Sept. 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.37	.80	.60	.88	3.2	4.7	2.2	2.2	.03	.00	1.0
2	.08	.41	.81	.60	.92	3.1	4.4	3.1	2.0	.05	.00	1.3
3	.07	.39	.85	.62	.96	3.1	3.8	7.2	2.0	.09	.00	2.0
4	.06	.39	.92	.62	1.0	3.0	4.2	174	2.2	.25	135	2.5
5	.07	.40	.99	.64	1.1	3.0	3.9	45	1.6	.21	126	1.9
6	.02	.47	.86	.66	1.2	3.0	4.1	16	1.0	.18	32	1.5
7	.08	.49	.80	.62	1.3	3.0	4.3	9.3	.75	3.2	10	1.1
8	.21	.50	.78	.58	1.5	3.0	4.2	6.8	.59	265	2.0	.80
9	.28	.52	.76	.58	1.6	3.0	3.7	16	.43	44	.60	1.3
10	.29	.48	.76	.58	1.8	4.1	3.2	66	.38	28	.15	1.0
11	.22	.50	.78	.58	2.1	6.0	2.7	16	.33	13	1.0	.80
12	.19	.48	.80	.58	2.2	6.4	2.2	9.0	.31	2.7	.66	1.5
13	.11	.47	.94	.58	3.0	7.3	2.4	6.1	16	1.4	.44	1.0
14	.12	.55	1.1	.58	3.0	7.2	2.1	4.6	154	.71	.30	.71
15	.10	.53	1.1	.58	2.2	5.9	11	3.8	46	.47	.50	.36
16	.09	.56	1.1	.60	2.1	4.6	7.2	3.2	14	.28	4.0	.16
17	.04	.60	1.2	.60	2.2	4.1	5.0	2.8	5.6	.13	2.5	.11
18	.11	.70	1.6	.64	2.4	3.4	4.2	2.5	3.1	.11	1.5	.21
19	.11	.70	1.5	.70	2.5	3.3	3.7	4.6	2.2	.07	.80	.06
20	.14	.66	1.3	.74	2.7	3.4	3.3	9.5	1.4	.02	.50	.14
21	.13	.68	1.1	.82	2.9	3.2	12	8.2	4.6	.00	3.0	.19
22	.16	.64	1.0	.90	3.1	2.8	47	12	9.8	.00	2.0	.21
23	.22	.71	1.0	1.0	3.5	2.5	18	8.6	34	.00	10	.24
24	.25	.76	1.1	1.1	3.8	2.8	8.8	8.1	11	.00	3.0	.07
25	.25	.83	1.2	1.1	4.3	2.7	6.1	5.3	4.5	.00	1.0	.14
26	.26	.89	1.2	1.1	4.2	2.7	4.9	3.9	2.3	.00	1.6	.01
27	.26	.88	1.3	1.0	3.7	2.5	4.0	3.1	1.0	.00	1.0	.01
28	.33	.66	1.1	.80	3.3	3.8	3.6	2.5	.54	.00	2.0	.00
29	.32	.60	.86	.80	---	4.5	3.0	2.4	.31	.00	1.4	.00
30	.38	.54	.72	.80	---	3.7	2.5	1.9	.14	.00	1.0	.00
31	.33	---	.60	.84	---	4.1	---	2.0	---	.00	.80	---
TOTAL	5.41	17.36	30.93	22.54	65.46	118.4	194.2	465.7	324.28	359.90	344.75	20.32
MEAN	.17	.58	1.00	.73	2.34	3.82	6.47	15.0	10.8	11.6	11.1	.68
MAX	.38	.89	1.6	1.1	4.3	7.3	47	174	154	265	135	2.5
MIN	.02	.37	.60	.58	.88	2.5	2.1	1.9	.14	.00	.00	.00
AC-FT	11	34	61	45	130	235	385	924	643	714	684	40

CAL YR 1976 TOTAL 3230.34 MEAN 8.83 MAX 519 MIN .00 AC-FT 6410
WTR YR 1977 TOTAL 1969.25 MEAN 5.40 MAX 265 MIN .00 AC-FT 3910

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

06853900 LOVEWELL RESERVOIR NEAR LOVEWELL, KS

LOCATION.--Lat 39°53'04", long 98°01'41", in NW¼NE¼NE¼ sec.18, T.2 S., R.6 W., Jewell County, Hydrologic Unit 10250016, at south end of Lovewell Dam on White Rock Creek, 3 mi (5 km) northwest of Lovewell, and 19.3 mi (31.1 km) upstream from mouth.

DRAINAGE AREA.--345 mi² (894 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--May 1957 to current year. Monthly records only, May to September 1957.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). From June 15, 1960, to May 6, 1975 water-stage recorder at north end of dam at same datum.

REMARKS.--Reservoir is formed by earthfill dam. Closure was made May 29, 1957. Total capacity of 186,290 acre-ft (230 hm³) consists of the following: Dead storage, 5,050 acre-ft (6.23 hm³) below elevation 1,562.07 ft (476.119 m); irrigation pool, 36,640 acre-ft (45.2 hm³) between elevations 1,562.07 ft (476.119 m) and 1,582.6 ft (482.38 m); flood control pool, 50,460 acre-ft (62.2 hm³) (486.25 m) and 1,610.3 ft (490.82 m). Storage in reservoir is derived from White Rock Creek and diversion from the Republican River through upper Courtland Canal. Releases are made into White Rock Creek and for irrigation of 30,000 acres (12,000 hm²), through lower Courtland Canal. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,595.01 ft (486.159 m) Oct. 13, 1973, contents, 90,700 acre-ft (112 hm³); minimum since irrigation pool was first filled, 1,563.70 ft (476.616 m) Oct. 1, 2, 1957, contents, 6,350 acre-ft (7.83 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,582.94 ft (482.480 m) Sept. 6, contents, 42,710 acre-ft (52.7 hm³); minimum, 1,577.00 ft (480.670 m) Oct. 1, contents, 27,180 acre-ft (33.5 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)

1,576	24,980	1,582	39,920
1,578	29,480	1,584	46,020
1,580	34,440		

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1577.06	1578.55	1579.68	1579.68	1579.70	1579.63	1580.24	1582.03	1582.77	1582.63	1578.00	1582.75
2	1577.17	1578.59	1579.72	1579.69	1579.70	1579.68	1580.30	1582.20	1582.74	1582.53	1578.01	1582.76
3	1577.17	1578.63	1579.76	1579.70	1579.71	1579.68	1580.40	1582.30	1582.75	1582.42	1577.93	1582.84
4	1577.22	1578.66	1579.78	1579.72	1579.70	1579.69	1580.45	1582.43	1582.75	1582.25	1578.20	1582.90
5	1577.26	1578.73	1579.80	1579.72	1579.70	1579.67	1580.49	1582.54	1582.73	1582.06	1578.63	1582.93
6	1577.37	1578.77	1579.80	1579.72	1579.69	1579.67	1580.54	1582.55	1582.68	1581.80	1578.99	1582.94
7	1577.40	1578.80	1579.82	1579.73	1579.69	1579.67	1580.60	1582.55	1582.66	1581.46	1579.29	1582.92
8	1577.45	1578.85	1579.82	1579.72	1579.69	1579.67	1580.66	1582.56	1582.63	1581.20	1579.54	1582.92
9	1577.51	1578.88	1579.82	1579.72	1579.70	1579.67	1580.69	1582.57	1582.56	1580.94	1579.67	1582.90
10	1577.57	1578.92	1579.80	1579.70	1579.69	1579.78	1580.73	1582.58	1582.53	1580.67	1579.80	1582.86
11	1577.63	1578.94	1579.81	1579.70	1579.69	1579.83	1580.77	1582.58	1582.49	1580.51	1579.99	1582.87
12	1577.67	1578.97	1579.80	1579.71	1579.70	1579.82	1580.84	1582.56	1582.51	1580.39	1580.14	1582.93
13	1577.72	1579.01	1579.79	1579.71	1579.70	1579.82	1580.88	1582.54	1582.60	1580.31	1580.30	1582.91
14	1577.77	1579.04	1579.80	1579.71	1579.70	1579.83	1580.93	1582.51	1582.63	1580.25	1580.45	1582.90
15	1577.78	1579.07	1579.79	1579.70	1579.70	1579.82	1581.03	1582.53	1582.67	1580.20	1580.74	1582.90
16	1577.81	1579.11	1579.79	1579.70	1579.70	1579.79	1581.12	1582.51	1582.68	1580.14	1581.00	1582.89
17	1577.82	1579.17	1579.78	1579.70	1579.70	1578.81	1581.17	1582.50	1582.73	1580.01	1581.32	1582.87
18	1577.85	1579.21	1579.78	1579.70	1579.70	1579.79	1581.25	1582.52	1582.73	1579.80	1581.45	1582.83
19	1577.88	1579.24	1579.76	1579.72	1579.70	1579.83	1581.29	1582.58	1582.75	1579.66	1581.54	1582.80
20	1577.92	1579.30	1579.75	1579.72	1579.70	1579.82	1581.35	1582.65	1582.70	1579.40	1581.59	1582.75
21	1577.96	1579.31	1579.75	1579.72	1579.71	1579.82	1581.40	1582.75	1582.77	1579.15	1581.78	1582.76
22	1577.98	1579.33	1579.75	1579.72	1579.72	1579.83	1581.47	1582.73	1582.79	1578.91	1582.21	1582.75
23	1578.06	1579.38	1579.74	1579.73	1579.76	1579.80	1581.57	1582.71	1582.80	1578.72	1582.45	1582.73
24	1578.09	1579.45	1579.74	1579.72	1579.71	1579.78	1581.61	1582.67	1582.81	1578.54	1582.48	1582.70
25	1578.14	1579.50	1579.74	1579.73	1579.69	1579.82	1581.67	1582.64	1582.85	1578.39	1582.55	1582.69
26	1578.19	1579.54	1579.74	1579.73	1579.68	1579.88	1581.74	1582.62	1582.87	1578.24	1582.63	1582.68
27	1578.24	1579.57	1579.73	1579.72	1579.68	1579.94	1581.83	1582.66	1582.87	1578.15	1582.71	1582.66
28	1578.29	1579.60	1579.72	1579.71	1579.67	1580.10	1581.85	1582.70	1582.84	1578.08	1582.76	1582.64
29	1578.36	1579.62	1579.72	1579.71	---	1580.13	1581.90	1582.74	1582.78	1578.04	1582.75	1582.65
30	1578.44	1579.65	1579.69	1579.70	---	1580.15	1581.96	1582.75	1582.72	1578.02	1582.74	1582.66
31	1578.48	---	1579.69	1579.71	---	1580.17	---	1582.76	---	1578.00	1582.74	---
MEAN	1577.78	1579.11	1579.76	1579.71	1579.70	1579.79	1581.09	1582.57	1582.71	1580.03	1580.76	1582.81
MAX	1578.48	1579.65	1579.82	1579.73	1579.76	1580.17	1581.96	1582.76	1582.87	1582.63	1582.76	1582.94
MIN	1577.06	1578.55	1579.68	1579.68	1579.67	1578.81	1580.24	1582.03	1582.49	1578.00	1577.93	1582.64
(+)	30,630	33,540	33,640	33,690	33,580	34,880	39,800	42,170	42,050	29,480	42,110	41,870
(‡)	+3,490	+2,910	+100	+50	-110	+1,300	+4,920	+2,370	-120	-12,570	+12,630	+240

CAL YR 1976 .... (‡) +2,700
WTR YR 1977 .... (‡) +14,730

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

06854000 WHITE ROCK CREEK AT LOVEWELL, KS

LOCATION.--Lat 39°53'10", long 98°01'20", in NW¼NW¼ sec.17, T.2 S., R.6 W., Jewell County, Hydrologic Unit 10250016, on right bank, 1,400 ft (427 m) east of Lovewell Dam, 2.5 mi (4.0 km) northwest of Lovewell, and at mile 18.8 (30.2 km).

DRAINAGE AREA.--345 mi² (894 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1340: 1946-47, 1949-50(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,531.52 ft (466.807 m) above mean sea level (Bureau of Reclamation bench mark). May 21, 1946, to Sept. 13, 1947, nonrecording gage, and Sept. 14, 1947, to Apr. 23, 1951, water-stage recorder, at site 3.0 mi (4.8 km) downstream at datum 1,513.95 ft (461.452 m) above mean sea level (Corps of Engineers bench mark). Apr. 24, 1951, to Nov. 8, 1952, nonrecording gage, and Nov. 9, 1952, to June 14, 1960, water-stage recorder, at site 2.0 mi (3.2 km) downstream at datum 1,519.53 ft (463.153 m) above mean sea level.

REMARKS.--Records good. Flow completely regulated by Lovewell Reservoir beginning May 29, 1957 (see sta 06853900). Large flows from Republican River enter Lovewell Reservoir from upper Courtland Canal. Figures of flow do not include diversion immediately above station into Lower Courtland Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,300 ft³/s (660 m³/s) July 10, 1950, gage height, 21.62 ft (6.590 m), site and datum then in use, from rating curve extended above 5,200 ft³/s (147 m³/s) on basis of a discharge measurement of 20,800 ft³/s (589 m³/s) made at site about 6.0 mi (9.7 km) upstream; no flow at times in 1948, 1953-60, 1966, 1967, 1971. Maximum discharge since construction of Lovewell Dam in 1957, 2,650 ft³/s (75.0 m³/s) Sept. 4, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1870, that of July 10, 1950, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34 ft³/s (0.963 m³/s) Aug. 22, gage height, 2.12 ft (0.646 m); minimum, 0.01 ft³/s (<0.001 m³/s) Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	.26	.10	.15	.12	.08	.13	.28	.38	.48	.06	1.4
2	.59	.15	.09	.17	.12	.10	.14	.60	.48	.61	.09	1.1
3	.26	.10	.08	.17	.12	.12	.14	1.4	.90	.50	.40	1.2
4	2.0	.08	.08	.15	.12	.11	.21	.45	.53	.35	.45	.30
5	.30	.08	.08	.11	.10	.12	.12	.31	.47	.26	.40	.18
6	.26	.08	.10	.11	.10	.14	.54	.26	.41	.28	.49	.26
7	.30	.10	.10	.10	.11	1.3	.34	.21	.35	.26	.20	.18
8	.30	.43	.09	.10	.16	.50	.22	.22	.35	3.8	.12	.16
9	.22	.65	.09	.10	.13	.31	.18	.21	.42	4.1	.08	.15
10	.22	.53	.10	.14	.14	.35	.15	.20	.89	.38	.07	.08
11	.18	.26	.08	.10	.14	.48	.14	.33	1.6	.47	.16	.10
12	.15	.22	.10	.10	.13	.27	.18	1.0	1.2	.35	.13	.35
13	.15	.22	.11	.10	.13	.19	.18	.87	.74	.36	.21	.19
14	.12	.22	.10	.10	.14	.21	.19	.65	.79	.18	.40	.20
15	.12	.18	.09	.10	.12	.18	.16	.54	1.4	.13	.42	.18
16	.10	.10	.08	.09	.12	.16	.18	.31	1.0	.16	.62	.18
17	.10	.08	.08	.10	.14	.21	.18	.23	.90	.23	.30	.18
18	.10	.08	.08	.10	.13	.18	.18	.21	.42	.37	.43	.16
19	.10	.06	.10	.11	.11	.32	.18	.38	.41	.58	.42	.18
20	.12	.06	.12	.10	.11	.26	.20	.29	.40	.53	.18	.20
21	.15	.06	.16	.09	.12	.15	.21	.56	.58	.53	.49	.18
22	.18	.05	.10	.08	.16	.13	.25	.25	.49	.19	5.3	.16
23	.26	.06	.08	.08	.24	.15	.29	.42	.41	.20	1.3	.17
24	.30	.07	.09	.08	.23	.16	.28	5.7	.52	.15	.23	.15
25	.30	.08	.10	.09	.14	.13	.19	.50	.48	.15	.18	.15
26	.22	.08	.10	.08	.14	.17	.20	.41	.41	.15	.18	.26
27	.15	.07	.12	.08	.10	.20	.20	.53	.43	.32	.11	1.6
28	.12	.06	.12	.10	.09	.44	.22	.42	.37	.68	.18	.35
29	.12	.07	.12	.10	---	.21	.26	.47	.34	.23	.10	.22
30	.26	.09	.12	.10	---	.13	.26	.38	.39	.08	.09	.18
31	.30	---	.12	.11	---	.08	---	.35	---	.06	.08	---
TOTAL	8.70	4.63	3.08	3.29	3.71	7.55	6.30	18.94	18.46	17.12	13.87	10.35
MEAN	.28	.15	.099	.11	.13	.24	.21	.61	.62	.55	.45	.35
MAX	2.0	.65	.16	.17	.24	1.3	.54	5.7	1.6	4.1	5.3	1.6
MIN	.10	.05	.08	.08	.09	.08	.12	.20	.34	.06	.06	.08
AC-FT	17	9.2	6.1	6.5	7.4	15	12	38	37	34	28	21

CAL YR 1976 TOTAL 145.65 MEAN .40 MAX 5.2 MIN .05 AC-FT 289
WTR YR 1977 TOTAL 116.00 MEAN .32 MAX 5.7 MIN .05 AC-FT 230

06855800 BUFFALO CREEK NEAR JAMESTOWN, KS

LOCATION.--Lat 39°36'55", long 97°51'20", in SW¼NW¼SW¼ sec.14, T.6 S., R.5 W., Cloud County, Hydrologic Unit 10260017, at downstream side of highway bridge, 1.1 mi (1.8 km) north of Jamestown, and 21 mi (34 km) upstream from mouth.

DRAINAGE AREA.--330 mi² (850 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1954-59. July 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,373.66 ft (418.692 m) above mean sea level. Prior to June 7, 1966, water-stage recorder at present site and datum. June 7, 1966, to Feb. 3, 1967, nonrecording gage at site 5.4 mi (8.7 km) downstream at different datum. Feb. 4, 1967, to May 3, 1967, nonrecording gage at present site and datum.

REMARKS.--Records poor. Waste water from the Courtland West Irrigation Canal is occasionally diverted into the salt marsh above gage and may cause a considerable increase in low flow during irrigation periods. Some diversions above station for irrigation.

AVERAGE DISCHARGE.--18 years, 71.9 ft³/s (2.036 m³/s), 52,090 acre-ft/yr (64.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,800 ft³/s (787 m³/s) Oct. 12, 1973, gage height, 19.65 ft (5.989 m); no flow at times in 1959, 1964-67.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages known since at least 1898, 18.5 ft (5.64 m) in 1948, from information by local resident, and that of Oct. 12, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 22	0300	1,180	33.4	15.42	4.700
Aug. 16	1300	* 2,200	62.3	17.48	5.328
Sept. 2	1900	1,190	33.7	15.48	4.718

Minimum observed, 0.07 ft³/s (0.002 m³/s) Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.0	.10	.10	.10	.70	3.7	1.2	65	39	16	16
2	1.0	.95	.10	.10	.10	.70	4.0	1.4	178	17	13	618
3	1.0	.95	.10	.10	.12	.70	4.4	1.7	140	18	14	922
4	1.1	.95	.10	.10	.15	.70	4.0	2.2	66	8.8	121	701
5	1.2	.90	.10	.10	.20	.70	5.0	2.6	29	2.0	104	526
6	1.3	.90	.10	.10	.25	.70	4.6	2.5	23	2.8	73	333
7	1.4	.90	.10	.10	.35	.70	4.1	2.3	20	6.0	73	189
8	1.5	.90	.10	.10	.45	.70	3.8	2.3	12	11	61	49
9	1.4	.85	.10	.10	.50	.75	3.5	2.4	6.3	14	51	43
10	1.3	.85	.10	.10	.70	.80	3.3	2.7	3.7	10	47	29
11	1.2	.85	.10	.10	.90	1.0	3.2	3.0	4.5	6.0	45	17
12	1.1	.40	.10	.10	1.1	1.4	3.0	2.8	5.7	37	46	22
13	1.0	.20	.10	.10	1.5	1.7	3.4	2.7	224	44	15	120
14	.95	.10	.10	.10	1.3	1.5	3.5	2.7	140	33	6.6	81
15	.90	.10	.10	.10	1.0	1.4	3.0	2.9	29	33	6.6	45
16	.90	.10	.10	.10	.85	1.3	2.5	3.4	12	32	1330	20
17	.90	.10	.10	.12	.70	1.2	2.0	3.8	23	23	1150	18
18	.90	.10	.10	.12	.65	1.2	1.8	4.4	36	6.8	600	20
19	.90	.10	.10	.14	.65	1.3	1.4	5.2	40	1.5	456	36
20	.90	.15	.10	.14	.62	1.5	1.0	6.4	28	.94	316	29
21	.90	.15	.10	.16	.62	1.6	1.4	8.0	243	5.1	218	14
22	.90	.15	.10	.17	.62	1.7	1.7	11	866	26	233	18
23	.90	.15	.10	.18	.70	1.8	1.6	14	425	37	395	12
24	.95	.15	.10	.19	.80	2.0	1.5	18	284	34	224	13
25	.95	.20	.10	.19	.85	2.2	1.4	23	222	28	193	7.3
26	.95	.20	.10	.19	.90	2.3	1.4	32	200	32	180	6.4
27	.95	.15	.10	.18	.80	2.5	1.3	47	172	35	146	4.0
28	1.0	.15	.10	.16	.75	2.7	1.3	16	116	12	202	4.1
29	1.0	.10	.10	.13	---	2.9	1.2	44	84	15	148	5.8
30	1.0	.10	.10	.10	---	3.1	1.2	96	55	12	79	12
31	1.0	---	.10	.10	---	3.4	---	126	---	9.5	18	---
TOTAL	32.35	12.85	3.10	3.87	18.23	46.85	80.0	493.6	3756.2	588.44	6669.2	3856.4
MEAN	1.04	.43	.10	.12	.65	1.51	2.67	15.9	125	19.0	215	129
MAX	1.5	1.0	.10	.19	1.5	3.4	5.0	126	866	44	1330	922
MIN	.90	.10	.10	.10	.10	.70	1.0	1.2	3.7	.94	6.6	4.0
AC-FT	64	25	6.1	7.7	36	93	159	979	7450	1170	13230	7650

CAL YR 1976 TOTAL 3464.03 MEAN 9.46 MAX 330 MIN .03 AC-FT 6870
WTR YR 1977 TOTAL 15561.09 MEAN 42.6 MAX 1330 MIN .10 AC-FT 30870

06855900 WOLF CREEK NEAR CONCORDIA, KS

LOCATION.--Lat 39°32'35", long 97°43'20", in SW¼NW¼SW¼ sec.12, T.6 S., R.4 W., Cloud County, Hydrologic Unit 10250017, at downstream side of bridge on State Highway 9, 3.8 mi (6.1 km) southwest of Concordia, and at mile 7.3 (11.7 km).

DRAINAGE AREA.--56 mi² (145 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1962 to current year.

REVISED RECORDS.--WRD KS-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 1,375.43 ft (419.231 m) above mean sea level.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--15 years, 10.8 ft³/s (0.306 m³/s), 7,820 acre-ft/yr (9.64 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,180 ft³/s (118 m³/s) Oct. 11, 1973, gage height, 17.95 ft (5.471 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 13	1930	342	9.68	10.02	3.054	Aug. 16	0915	* 1,540	43.6	15.63	4.764
June 22	0100	502	14.2	11.82	3.603	Aug. 22	2245	383	10.8	10.54	3.213
Aug. 4	1315	344	9.74	10.05	3.063	Sept. 2	1845	664	18.8	13.16	4.011

Minimum discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.14	.04	.05	.44	.45	.00	1.1
2	.00	.00	.00	.00	.00	.16	.03	.10	.38	.25	.00	316
3	.00	.00	.00	.00	.00	.22	.06	.08	.32	.15	.00	73
4	.00	.00	.00	.00	.00	.34	.06	.04	.32	.08	182	9.2
5	.00	.00	.00	.00	.00	.10	.05	.05	.32	.04	16	4.1
6	.00	.00	.00	.00	.00	.13	.05	.04	.32	.03	7.5	2.7
7	.00	.00	.00	.00	.00	.13	.05	.03	.32	.02	2.6	2.0
8	.00	.00	.00	.00	.00	.12	.04	.02	.32	.01	1.3	1.6
9	.00	.00	.00	.00	.02	.12	.04	.04	.32	.00	1.1	1.1
10	.00	.00	.00	.00	.02	.13	.04	.03	.29	.00	.85	1.1
11	.00	.00	.00	.00	.03	.17	.04	.02	.29	.00	2.2	1.1
12	.00	.00	.00	.00	.04	.23	.08	.01	.29	.00	4.1	3.0
13	.00	.00	.00	.00	.07	.17	.07	.01	109	.00	1.0	3.5
14	.00	.00	.00	.00	.15	.19	.06	.01	31	.00	.78	1.4
15	.00	.00	.00	.00	.30	.13	.07	.05	2.9	.00	.53	1.1
16	.00	.00	.00	.00	.58	.10	.08	.10	.64	.00	667	1.0
17	.00	.00	.00	.00	.56	.06	.10	.08	50	.00	35	.94
18	.00	.00	.00	.00	.73	.06	.12	.07	35	.00	5.3	.86
19	.00	.00	.00	.00	.67	.05	.15	.15	25	.00	2.1	.78
20	.00	.00	.00	.00	.53	.04	.20	.25	5.6	.00	1.6	.75
21	.00	.00	.00	.00	.53	.03	.30	.50	144	.00	12	.68
22	.00	.00	.00	.00	.39	.03	.20	.10	199	.00	72	.84
23	.00	.00	.00	.00	.35	.03	.15	.05	14	.00	155	1.0
24	.00	.00	.00	.00	.55	.02	.12	.02	13	.00	10	1.9
25	.00	.00	.00	.00	.33	.02	.10	.00	100	.00	3.3	2.3
26	.00	.00	.00	.00	.18	.02	.08	.26	7.7	.00	2.0	2.6
27	.00	.00	.00	.00	.17	.02	.07	.38	2.8	.00	1.3	2.6
28	.00	.00	.00	.00	.16	.10	.06	.28	1.4	.00	10	3.2
29	.00	.00	.00	.00	---	.08	.05	.32	.86	.00	19	3.5
30	.00	.00	.00	.00	---	.06	.05	.90	.62	.00	3.8	4.0
31	.00	---	.00	.00	---	.05	---	.95	---	.00	1.7	---
TOTAL	.00	.00	.00	.00	6.36	3.21	2.61	4.99	746.45	1.03	1221.06	448.95
MEAN	.000	.000	.000	.000	.23	.10	.087	.16	24.9	.033	39.4	15.0
MAX	.00	.00	.00	.00	.73	.34	.30	.95	199	.45	667	316
MIN	.00	.00	.00	.00	.00	.02	.03	.00	.29	.00	.00	.68
AC-FT	.00	.00	.00	.00	13	6.4	5.2	9.9	1480	2.0	2420	890

CAL YR 1976 TOTAL 309.95 MEAN .85 MAX 83 MIN .00 AC-FT 615
WTR YR 1977 TOTAL 2434.66 MEAN 6.67 MAX 667 MIN .00 AC-FT 4830

06856000 REPUBLICAN RIVER AT CONCORDIA, KS

LOCATION.--Lat 39°35'25", long 97°39'32", in SW¼SW¼NE¼ sec.28, T.5 S., R.3 W., Cloud County, Hydrologic Unit 10250017, at right downstream side of bridge on U.S. Highway 81, 1 mi (1.6 km) north of Concordia, 4.9 mi (7.9 km) downstream from Buffalo Creek, and at mile 98.5 (158.5 km).

DRAINAGE AREA.--23,560 mi² (61,020 km²), of which about 7,500 mi² (19,400 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310. Gage-height records collected at nearby sites since 1931 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1340: 1946-47.

GAGE.--Water-stage recorder. Datum of gage is 1,333.62 ft (406.487 m) above mean sea level. Prior to Oct. 8, 1947, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are poor. Natural flow affected by irrigation development above station and by storage in seven reservoirs in Colorado, Nebraska, and Kansas. Considerable regulation since 1952 by Harlan County Reservoir (see sta 06849000).

AVERAGE DISCHARGE.--32 years, 748 ft³/s (21.18 m³/s), 541,900 acre-ft/yr (668 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,000 ft³/s (2,124 m³/s) June 25, 1947, gage height, 14.90 ft (4.542 m); minimum, 8.0 ft³/s (0.23 m³/s) Sept. 2, 3, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1895, about 18 ft (5.5 m) June 2, 1935, present site and datum, from information by U.S. Weather Bureau, discharge, about 207,000 ft³/s (5,862 m³/s), on basis of records for stations upstream. Flood of June 21, 1915, reached a stage of 14.1 ft (4.30 m), present site and datum, from information by U.S. Weather Bureau, discharge, about 60,000 ft³/s (1,699 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 14	0200	4,350	123	5.96	1.817	Aug. 23	1600	5,940	168	7.09	2.161
June 22	1200	6,740	191	7.58	2.310	Sept. 14	0400	* 7,580	215	8.04	2.451
Aug. 16	2300	6,670	189	7.54	2.298						

Minimum daily discharge, 25 ft³/s (0.71 m³/s) Nov. 30 to Dec. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	65	25	80	100	163	134	95	247	253	390	460
2	93	60	25	80	110	164	115	98	164	248	369	1810
3	84	58	25	80	110	166	103	132	215	240	306	2120
4	82	52	40	80	110	166	111	206	199	204	845	2570
5	74	51	70	80	110	164	110	220	152	190	951	2110
6	90	54	90	80	110	167	121	153	119	190	717	1810
7	132	57	110	80	110	163	118	123	104	227	1080	1140
8	96	58	110	80	110	161	97	147	96	224	857	719
9	84	60	110	70	130	158	85	135	84	284	528	563
10	83	61	100	70	150	153	75	121	76	376	373	497
11	80	62	90	70	160	170	71	140	66	503	347	440
12	74	55	90	70	200	197	70	167	86	569	340	463
13	64	60	80	70	230	210	84	158	1250	489	335	4060
14	58	57	80	70	270	216	84	143	2580	428	332	6480
15	51	61	80	70	270	195	81	124	729	351	332	2270
16	50	81	90	70	260	175	144	111	525	323	3760	1170
17	51	84	90	60	260	165	135	119	692	343	4020	835
18	55	77	90	60	270	158	124	161	1190	441	1710	651
19	56	75	90	60	280	155	110	132	554	449	1050	548
20	59	78	90	60	313	159	121	196	348	388	790	509
21	64	78	80	60	277	149	152	294	553	365	796	467
22	68	71	80	80	221	144	153	1010	4990	365	1400	417
23	71	70	80	90	202	145	475	570	2070	388	4840	389
24	72	77	90	100	195	125	394	372	1170	405	2200	383
25	66	77	90	100	205	109	248	252	1270	399	1030	384
26	62	77	90	100	197	121	188	194	832	384	1020	335
27	62	57	90	100	179	102	155	183	584	374	751	315
28	61	55	90	90	171	117	131	274	453	438	722	304
29	60	40	80	90	---	135	114	259	348	538	1020	300
30	67	25	80	90	---	147	103	277	296	503	795	296
31	68	---	80	90	---	138	---	363	---	424	528	---
TOTAL	2245	1893	2505	2430	5310	4857	4206	6929	22042	11303	34524	34815
MEAN	72.4	63.1	80.8	78.4	190	157	140	224	735	365	1114	1161
MAX	132	84	110	100	313	216	475	1010	4990	569	4840	6480
MIN	50	25	25	60	100	102	70	95	66	190	332	296
AC-FT	4450	3750	4970	4820	10530	9630	8340	13740	43720	22420	68480	69060

CAL YR 1976 TOTAL 78096 MEAN 213 MAX 2360 MIN 25 AC-FT 154900
WTR YR 1977 TOTAL 133059 MEAN 365 MAX 6480 MIN 25 AC-FT 263900

06856600 REPUBLICAN RIVER AT CLAY CENTER, KS
(National stream-quality accounting network station)

LOCATION.--Lat 39°21'20", long 97°07'34", in SW¼NW¼SW¼ sec.17, T.8 S., R.3 E., Clay County, Hydrologic Unit 10250017, at downstream side of bridge on State Highway 15, 1 mi (1.6 km) south of Clay Center, 4 mi (6.4 km) downstream from Five Creeks, and at mile 38.2 (61.5 km).

DRAINAGE AREA.--24,542 mi² (63,564 km²), of which about 7,500 mi² (19,400 km²) is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1917 to current year. Monthly discharge only for some periods, published in WSP 1310. Prior to February 1934, published as "at Wakefield". Gage-height records collected in this vicinity August 1904 to October 1917 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1929, 1933-34. WSP 1310: 1922.

GAGE.--Water-stage recorder. Datum of gage is 1,159.21 ft (353.327 m) above mean sea level. See WSP 1919 for history of changes prior to Sept. 23, 1949.

REMARKS.--Records good except those for winter periods, which are poor. Natural flow affected by irrigation development above station and by reservoirs in Colorado, Nebraska, and Kansas. Flow moderately regulated since 1952 by Harlan County Reservoir (see sta 06849000).

AVERAGE DISCHARGE.--60 years, 1,014 ft³/s (28.72 m³/s), 734,600 acre-ft/yr (906 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 195,000 ft³/s (5,522 m³/s) June 3, 1935, gage height, 25.74 ft (7.846 m), from floodmarks, from rating curve extended above 61,000 ft³/s (1,728 m³/s) on basis of velocity-area studies; no flow for part of Aug. 10, 1934; minimum daily, 1 ft³/s (0.028 m³/s) Aug. 9-11, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1895, 26.2 ft (7.99 m) June 21, 1915, site and datum then in use, from information by U.S. Weather Bureau. Flood of May 29, 1903, reached a stage of 24.8 ft (7.56 m), site and datum then in use, from information by U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 4,700 ft³/s (133 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 23	1200	6,260	177	13.27	4.045	Aug. 28	2200	12,100	343	16.38	4.993
Aug. 18	0200	6,260	177	13.27	4.045	Sept. 15	1000	6,140	174	13.20	4.023
Aug. 23	2000	*14,800	419	17.58	5.358						

Minimum daily dishcarge, 45 ft³/s (1.274 m³/s) Dec. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	80	45	90	110	241	196	161	1030	432	382	1460
2	108	80	45	90	110	241	191	156	1240	375	392	2090
3	102	77	45	90	120	243	184	177	1060	336	359	3480
4	112	74	45	90	120	238	181	245	417	292	453	3060
5	98	72	50	90	120	230	171	222	331	256	788	2300
6	95	73	78	90	120	228	165	214	288	232	1120	2490
7	93	72	131	90	120	225	162	217	245	219	1240	2180
8	89	69	117	90	120	225	161	186	209	216	1060	1770
9	105	70	98	90	120	222	158	160	188	225	820	1240
10	101	72	95	90	140	221	145	165	170	222	660	996
11	92	73	90	80	160	226	138	155	159	280	520	830
12	88	71	90	80	190	228	131	144	576	385	450	809
13	84	65	90	80	220	230	131	144	408	444	390	980
14	82	66	90	80	270	241	130	160	260	455	340	2900
15	78	64	90	80	270	251	130	160	2130	436	320	5520
16	73	65	100	80	260	246	130	153	1220	404	484	2680
17	70	68	100	70	250	230	132	148	1720	334	2670	1700
18	68	72	100	60	270	271	156	141	2940	296	4560	1270
19	67	78	100	60	310	209	163	155	2230	288	2250	1040
20	67	80	90	60	337	204	179	185	1310	341	1510	898
21	69	77	90	60	351	201	168	878	1230	331	1250	791
22	70	79	90	60	382	198	163	1860	3740	342	1480	709
23	74	78	90	80	345	195	166	1240	5470	348	7690	648
24	75	79	100	100	304	191	168	1060	2930	356	9060	613
25	75	78	100	110	281	186	312	633	2860	304	4510	544
26	77	77	100	110	270	181	318	429	2060	295	2620	477
27	80	67	100	110	268	177	246	328	1650	315	2920	438
28	79	60	100	110	259	210	213	304	1010	335	7870	390
29	79	55	90	110	---	231	188	290	748	336	7430	365
30	82	50	90	110	---	250	172	670	862	357	2340	345
31	82	---	90	110	---	283	---	1770	---	345	1510	---
TOTAL	2610	2141	2729	2700	6197	6823	5248	12910	40391	10132	69448	44925
MEAN	84.2	71.4	88.0	87.1	221	220	175	416	1346	327	2240	1498
MAX	112	80	131	110	382	251	318	1860	5470	455	9060	5520
MIN	67	50	45	60	110	177	130	141	159	216	320	345
AC-FT	5180	4250	5410	5360	12290	13530	10410	25610	80120	20100	137800	89110

CAL YR 1976 TOTAL 101313 MEAN 277 MAX 5890 MIN 45 AC-FT 201000
WTR YR 1977 TOTAL 206254 MEAN 565 MAX 9060 MIN 45 AC-FT 409100

06856600 REPUBLICAN RIVER AT CLAY CENTER, KS--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1973 to current year.
WATER TEMPERATURES: February 1973 to current year.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since February 1973.

REMARKS.--In addition to water-quality monitor, samples were collected by local observer. Observer samples were used to interpret periods of monitor malfunctions. Sediment samples are collected only at selected flow conditions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,470 micromhos June 7, 1977; minimum, 124 micromhos Sept. 27, 1973.
WATER TEMPERATURES: Maximum, 32.5°C July 24, 1977; minimum, 0.0°C Jan. 7-10, 27, 1976.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 1,560 micromhos was observed Aug. 14, 1974.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,470 micromhos June 7; minimum daily, 248 micromhos Sept. 15.
WATER TEMPERATURES: Maximum daily, 32.5°C July 24; minimum daily, 2.5°C on several days during winter periods.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
OCT												
13...	89	860	7.8	14.0	7	290	76	84	19	69	1.8	13
NOV												
11...	71	950	7.8	4.0	6	330	94	97	22	82	2.0	12
DEC												
15...	92	1020	7.7	1.0	5	370	97	110	22	80	1.8	12
JAN												
18...	60	1020	7.2	.0	4	430	95	130	26	82	1.7	12
FEB												
08...	120	970	7.8	.0	2	320	66	95	20	65	1.6	9.9
MAR												
08...	142	930	7.9	8.0	10	320	73	95	19	63	1.5	10
APR												
13...	132	1100	8.1	18.0	8	300	76	86	20	86	2.2	12
MAY												
10...	168	820	8.2	20.0	85	270	59	81	17	66	1.7	13
JUN												
15...	2550	302	7.4	23.0	1500	94	4	30	4.6	21	.9	10
JUL												
13...	380	640	7.5	28.0	75	200	39	60	13	54	1.6	13
AUG												
18...	4040	188	7.1	23.0	1000	75	0	24	3.6	7.9	.4	9.0
SEP												
07...	2180	390	7.3	24.0	350	140	22	43	7.2	25	.9	11

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT												
13...	259	0	160	59	.5	11	554	.75	133	.08	.67	.22
NOV												
11...	291	0	170	72	.5	15	635	.86	123	.01	.35	.21
DEC												
15...	327	0	170	78	.5	17	661	.90	164	1.0	.84	.23
JAN												
18...	411	0	180	75	.5	27	769	1.05	125	1.3	.41	.03
FEB												
08...	309	0	140	63	.4	17	573	.78	186	.76	.39	.17
MAR												
08...	296	0	130	61	.4	19	553	.75	212	.68	.57	.25
APR												
13...	270	0	140	78	.5	12	599	.81	213	.01	.82	.28
MAY												
10...	260	0	140	57	.5	16	503	.68	228	.01	2.4	.51
JUN												
15...	110	0	27	14	.6	7.4	182	.25	1250	--	17	1.7
JUL												
13...	200	0	110	43	.6	9.9	410	.56	421	.04	.60	.38
AUG												
18...	91	0	18	6.7	.4	9.8	136	.19	1480	1.4	11	1.1
SEP												
07...	140	0	48	25	.4	15	257	.35	1510	1.0	1.8	.79

06856600 REPUBLICAN RIVER AT CLAY CENTER, KS--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	CHLOR-A PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)
OCT								
13...	10.0	100	870	5.4	45000	.138	.097	23970
NOV								
11...	13.0	82	830	--	100000	--	--	--
DEC								
15...	14.0	84	55	--	6200	--	--	--
JAN								
18...	10.8	60	980	--	460	--	--	--
FEB								
08...	14.6	86	410	3.5	4700	--	--	--
MAR								
04...	12.2	86	620	--	8300	--	--	--
APR								
13...	10.8	120	200	--	--	--	--	--
MAY								
10...	9.9	270	140	11	110000	--	--	--
JUN								
15...	5.4	13000	11000	--	--	--	--	--
JUL								
13...	7.5	1100	6400	--	--	--	--	--
AUG								
18...	6.0	20000	25000	24	--	--	--	--
SEP								
07...	6.9	5000	5700	--	--	--	--	--

B Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
OCT										
13...	7	0	8	<10	<9	1	0	0	0	<50
FEB										
08...	--	--	3	<10	<9	1	0	0	0	<50
MAY										
10...	9	--	8	<10	<8	2	0	0	0	<50
AUG										
18...	15	14	1	10	1	9	50	40	10	50

DATE	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)
OCT										
13...	<50	0	<10	<8	2	440	20	<100	<97	3
FEB										
08...	<50	0	<10	<9	1	200	10	100	98	2
MAY										
10...	<50	0	10	8	2	3000	20	<100	<96	4
AUG										
18...	49	1	50	37	13	46000	90	<100	<87	13

DATE	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT										
13...	40	100	60	.0	2	0	2	30	20	10
FEB										
08...	40	60	20	.1	3	0	3	20	20	0
MAY										
10...	0	390	390	.0	1	0	1	30	20	9
AUG										
18...	0	1200	1200	.4	3	3	0	240	220	20

06856600 REPUBLICAN RIVER AT CLAY CENTER, KS--Continued
(National stream-quality accounting network station)

PHYTOPLANKTON ANALYSES (OCT.1976 - MAY.1977)

		OCT 13.76	NOV 11.76	DEC 15.76	JAN 18.77
DATE					
TIME		1030	1050	1345	1415
TOTAL CELLS/ML		45000	100000	6200	460
DIVERSITY:	DIVISION	1.1	0.5	1.5	1.8
	.CLASS	1.1	0.5	1.5	1.9
	..ORDER	2.0	0.6	1.9	2.4
	...FAMILY	2.2	0.6	2.1	2.8
	....GENUS	2.5	0.6	2.2	2.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	*	0	--	-	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	*	0	--	-	--	-	--	-
...MICRACTINIACEAE								
....MICRACTINIUM	2700	6	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	510	1	--	-	32	1	7	2
....CHODATELLA	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	510	1	--	-	--	-	--	-
....FRANCEIA	*	0	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	*	0
....CRUCIGENIA	2000	5	--	-	--	-	--	-
....SCENEDESMUS	2300	5	--	-	530	9	28	6
....TETRASTRUM	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	770	2	--	-	530	9	80#	18
...PHACOTACEAE								
....PHACOTUS	*	0	--	-	--	-	--	-
...VOLVOCACEAE								
....PANDORINA	*	0	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	12000#	26	--	-	520	8.	35	8
....MELOSIRA	770	2	570	1	32	1	--	-
..PENNALES								
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	--	-	49	1	14	3
...NAVICULACEAE								
....ANOMOEONEIS	--	-	--	-	--	-	--	-
....CALONEIS	--	-	--	-	--	-	--	-
....GYROSIGMA	--	-	--	-	--	-	--	-
....NAVICULA	--	-	--	-	32	1	7	2
...NITZSCHIACEAE								
....NITZSCHIA	20000#	45	12000	12	650	10	42	9
...SURIRELLACEAE								
....SURIRELLA	*	0	--	-	160	3	38	8
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...MALLOMONADACEAE								
....MALLOMONAS	--	-	--	-	--	-	--	-
...OCHROMONADACEAE								
....OCHROMONAS	--	-	--	-	32	1	10	2
CYANOPHYTA (BLUE-GREEN ALGAE)								
.MYXOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	1300	3	--	-	--	-	--	-
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	90000#	88	--	-	--	-
....OSCILLATORIA	1300	3	--	-	3500#	57	170#	38
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	32	1	--	-
...CRYPTOMONODACEAE								
....CRYPTOMONAS	*	0	--	-	--	-	3	1
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	260	1	--	-	--	-	17	4
....TRACHELOMONAS	--	-	--	-	49	1	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..GYMNODINIALES								
...GYMNODINIACEAE								
....GYMNODINIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

06856600 REPUBLICAN RIVER AT CLAY CENTER, KS--Continued
(National stream-quality accounting network station)

PHYTOPLANKTON ANALYSES (OCT.1976 - MAY.1977)

DATE	FEB 8.77	MAR 8.77	MAY 10.77
TIME	1400	1100	1140
TOTAL CELLS/ML	4700	8300	110000
DIVERSITY: DIVISION	0.9	1.5	1.0
.CLASS	0.9	1.5	1.0
..ORDER	1.1	1.8	1.2
...FAMILY	1.8	2.1	2.2
....GENUS	1.8	2.2	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	--	-	--	-	5800	5
...HYDRODICTYACEAE						
....PEDIASTRUM	--	-	--	-	--	-
...MICRACTINIACEAE						
....MICRACTINIUM	--	-	--	-	3600	3
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	110	1	5400	5
....CHODATELLA	--	-	--	-	720	1
....DICTYOSPHAERIUM	--	-	--	-	9800	9
....FRANCEIA	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	720	1
....TREUBARIA	--	-	--	-	*	0
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	22000#	20
....CRUCIGENIA	--	-	110	1	--	-
....SCENEDESMUS	70	2	510	6	29000#	27
....TETRASTRUM	--	-	--	-	4300	4
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	250	5	430	5	--	-
...PHACOTACEAE						
....PHACOTUS	--	-	--	-	--	-
...VOLVOCACEAE						
....PANDORINA	--	-	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	230	5	430	5	18000#	17
....MELOSIRA	--	-	--	-	--	-
..PENNALES						
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	54	1	--	-
...NAVICULACEAE						
....ANOMOEONEIS	--	-	--	-	*	0
....CALONEIS	--	-	--	-	*	0
....GYROSIGMA	--	-	*	0	--	-
....NAVICULA	70	2	300	4	--	-
...NITZSCHIACEAE						
....NITZSCHIA	52	1	490	6	3300	3
...SURIRELLACEAE						
....SURIRELLA	100	2	410	5	1400	1
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...MALLOMONADACEAE						
....MALLOMONAS	*	0	--	-	--	-
...OCHROMONADACEAE						
....OCHROMONAS	26	1	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.MYXOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	--	-	--	-	2900	3
..OSCILLATORIALES						
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
....OSCILLATORIA	2800#	61	5100#	62	--	-
...RIVULARIACEAE						
....RAPHIDIOPSIS	970#	21	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.CRYPTOPHYCEAE						
..CRYPTOMONIDALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	--	-	--	-
...CRYPTOMONODACEAE						
....CRYPTOMONAS	--	-	--	-	*	0
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	320	4	--	-
....TRACHELOMONAS	--	-	--	-	720	1
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..GYMNODINIALES						
...GYMNODINIACEAE						
....GYMNODINIUM	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
      * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06856600 REPUBLICAN RIVER AT CLAY CENTER, KS--Continued
(National stream-quality accounting network station)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	835	924	1100	1030	940	974	802	851	386	798	803	532
2	775	914	1110	991	925	891	946	862	471	808	808	458
3	720	896	1110	1020	918	829	946	798	389	802	755	406
4	691	934	1120	972	877	818	944	674	545	833	695	379
5	787	968	1060	954	932	813	931	720	951	861	621	438
6	946	973	1030	945	876	834	913	823	1450	870	448	439
7	883	961	1110	927	826	842	944	835	1470	870	390	471
8	915	975	1190	909	802	869	954	827	1300	889	562	512
9	916	986	1170	900	769	884	1040	813	1180	883	570	608
10	797	971	1160	981	735	875	1070	826	1140	890	598	653
11	791	987	1210	1010	691	851	1010	860	1160	850	641	722
12	845	965	1160	1030	647	819	997	985	479	760	608	711
13	883	973	1110	1010	629	801	975	903	467	750	702	715
14	914	983	1040	974	657	803	1010	858	640	754	726	837
15	921	993	1000	1000	640	843	978	782	407	787	766	248
16	953	974	951	1040	652	830	954	773	380	875	594	301
17	958	994	895	1040	633	852	931	798	316	888	311	385
18	966	1030	824	1070	620	847	938	820	256	864	317	466
19	985	1010	817	1210	584	841	825	799	364	863	316	538
20	975	984	854	1010	602	829	777	778	413	832	385	613
21	987	965	891	1020	639	833	815	669	443	808	485	698
22	980	937	858	1030	660	811	811	406	254	812	443	743
23	979	971	856	1060	663	801	822	452	362	802	277	746
24	972	957	924	1000	699	815	796	565	361	778	305	763
25	954	956	878	929	747	818	700	535	348	762	296	773
26	951	964	830	911	795	803	540	594	437	863	370	764
27	936	970	817	862	815	810	634	688	408	855	379	777
28	926	1120	805	936	930	781	697	824	545	820	317	789
29	935	1130	834	931	---	753	760	839	661	805	285	812
30	925	1120	892	936	---	672	804	717	746	783	435	820
31	922	---	1000	938	---	741	---	340	---	770	568	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUFS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	12.0	5.5	3.0	3.0	6.0	12.0	22.5	24.0	27.0	27.0	26.5
2	21.5	12.0	6.5	3.5	3.5	6.5	12.5	23.0	23.5	28.5	28.5	26.5
3	20.5	10.0	6.0	4.0	3.5	6.0	10.5	24.5	24.5	29.5	26.5	26.5
4	18.5	7.5	6.0	4.0	4.0	5.5	9.0	24.5	28.0	29.5	27.0	25.5
5	16.0	7.5	6.0	4.0	4.0	6.0	9.5	24.0	30.0	29.0	29.0	26.0
6	14.5	9.0	4.5	4.5	4.0	7.5	14.0	25.5	28.5	30.0	28.0	26.5
7	14.0	8.5	4.0	4.5	3.5	9.0	17.5	24.5	27.0	29.0	29.5	25.5
8	14.5	8.5	4.0	4.5	4.0	11.5	19.0	24.0	27.5	28.5	30.5	27.0
9	15.5	10.0	5.0	3.5	4.0	13.0	19.5	24.0	27.5	27.5	30.0	26.0
10	17.5	9.0	4.0	3.5	4.5	13.0	17.5	22.0	28.5	28.0	30.0	24.0
11	18.5	6.5	4.0	3.0	4.5	13.5	17.5	22.0	29.0	28.0	26.5	24.0
12	18.5	4.5	4.5	3.0	4.0	12.0	18.0	23.0	25.0	29.0	26.5	24.0
13	18.0	4.0	5.0	4.0	4.5	11.5	18.0	22.5	25.5	29.5	28.5	24.0
14	17.5	4.5	5.0	4.5	4.5	14.0	20.0	24.0	28.5	30.0	28.5	26.0
15	14.5	5.5	5.0	3.5	4.0	14.0	19.0	24.5	26.0	30.5	29.0	24.5
16	12.0	6.0	4.5	2.5	4.5	12.5	19.0	25.0	26.5	31.0	26.5	22.0
17	10.0	7.5	4.5	3.0	5.0	13.0	20.5	24.0	23.5	31.0	24.0	24.5
18	9.5	9.5	4.5	2.5	5.0	13.5	19.0	25.0	23.5	30.0	24.5	25.0
19	8.5	8.5	5.5	3.5	5.0	11.0	20.0	23.0	27.0	29.5	25.0	22.5
20	9.0	7.5	3.5	5.0	6.0	10.5	20.0	22.5	28.0	30.0	26.5	23.0
21	10.5	6.0	2.5	5.0	7.5	10.0	15.5	21.0	26.0	29.5	27.0	23.0
22	11.0	4.5	3.0	4.5	10.0	10.5	17.5	20.5	22.5	30.5	25.5	23.5
23	14.5	6.0	4.0	5.0	9.0	12.5	20.0	23.0	24.0	31.0	22.0	23.5
24	11.0	6.5	4.0	4.5	7.5	13.0	19.5	25.5	26.0	32.5	22.0	21.5
25	10.0	8.0	4.0	4.0	7.0	12.5	18.0	26.5	26.5	29.0	23.5	22.0
26	9.5	7.0	4.0	4.5	6.5	15.0	19.0	26.0	28.0	27.0	26.0	22.0
27	9.5	4.5	4.0	5.0	6.5	18.0	21.0	25.0	29.5	27.5	26.0	22.5
28	9.0	4.5	4.0	3.0	7.5	16.5	22.5	26.5	29.0	29.0	24.0	20.5
29	9.5	4.5	4.0	3.0	---	12.5	21.0	28.0	27.5	30.0	23.0	20.5
30	10.5	5.5	3.5	2.5	---	11.0	20.0	25.0	27.0	29.5	25.0	21.5
31	10.5	---	3.0	3.0	---	10.5	---	21.5	---	26.5	26.5	---

06857050 MILFORD LAKE NEAR JUNCTION CITY, KS

LOCATION.--Lat 39°04'40", long 96°53'30", in SE¼ sec.20, T.11 S., R.5 E., Geary County, Hydrologic Unit 10250017, in control tower of dam on Republican River, 5 mi (8 km) northwest of Junction City and 7.7 mi (12.4 km) above mouth.

DRAINAGE AREA.--24,880 mi² (64,440 km²), of which a large area is noncontributing.

ELEVATION RECORDS

PERIOD OF RECORD.--December 1966 to current year. Prior to October 1971, published as "Milford Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Jan. 16, 1967. Total capacity 1,380,000 acre-ft (1,700 hm³) below elevation 1,182.0 ft (360.27 m). Crest of uncontrolled spillway is at elevation 1,173.6 ft (357.71 m). Storage capacity of 673,600 acre-ft (831 hm³) above elevation 1,144.4 ft (348.81 m) is provided for flood control. Storage capacity of 415,400 acre-ft (512 hm³) below elevation 1,144.4 ft (348.81 m) is provided for conservation and recreation. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,170.03 ft (356.625 m) Oct. 17, 1973, contents, 982,300 acre-ft (1,210 hm³); minimum since conservation pool first filled, 1,141.17 ft (347.829 m) Jan. 21, 1977, contents 365,200 acre-ft (450 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,149.35 ft (350.322 m) June 24, contents, 500,800 acre-ft (617 hm³); minimum, 1,141.17 ft (347.829 m) Jan. 21, contents, 365,200 acre-ft (450 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Computed by Corps of Engineers in 1967 from topographic maps)

1,140	348,100
1,145	425,100
1,150	512,800

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1142.46	1142.23	1141.60	1141.29	1141.27	1141.84	1142.53	1143.36	1145.52	1147.35	1143.68	1147.90
2	1142.44	1142.22	1141.57	1141.30	1141.27	1141.86	1142.62	1143.37	1145.62	1147.13	1143.40	1147.71
3	1142.45	1142.20	1141.59	1141.30	1141.27	1141.96	1142.78	1143.37	1145.72	1146.93	1143.34	1147.64
4	1142.54	1142.15	1141.58	1141.33	1141.28	1142.00	1142.80	1143.42	1145.77	1146.78	1143.48	1147.59
5	1142.53	1142.15	1141.58	1141.31	1141.30	1142.01	1142.76	1143.44	1145.80	1146.52	1143.57	1147.48
6	1142.50	1142.14	1141.55	1141.33	1141.30	1142.00	1142.76	1143.45	1145.84	1146.33	1143.97	1147.31
7	1142.49	1142.10	1141.58	1141.34	1141.30	1142.00	1142.77	1143.48	1145.83	1146.18	1144.07	1147.10
8	1142.48	1142.09	1141.47	1141.32	1141.30	1142.00	1142.79	1143.53	1145.87	1146.06	1144.13	1146.87
9	1142.48	1142.09	1141.49	1141.28	1141.32	1142.02	1142.79	1143.50	1145.86	1146.03	1144.19	1146.57
10	1142.48	1142.08	1141.47	1141.28	1141.32	1142.00	1142.78	1143.50	1145.84	1145.98	1144.22	1146.42
11	1142.47	1142.05	1141.45	1141.27	1141.34	1142.11	1142.79	1143.50	1145.92	1146.11	1144.19	1146.37
12	1142.48	1141.95	1141.45	1141.24	1141.37	1142.16	1142.81	1143.49	1146.22	1146.10	1144.10	1146.78
13	1142.47	1141.91	1141.41	1141.26	1141.42	1142.14	1142.87	1143.49	1146.28	1146.08	1144.01	1146.89
14	1142.47	1141.90	1141.45	1141.25	1141.44	1142.17	1142.89	1143.48	1146.30	1146.12	1143.94	1147.10
15	1142.46	1141.86	1141.44	1141.24	1141.44	1142.20	1142.91	1143.52	1146.42	1146.05	1143.81	1147.68
16	1142.42	1141.83	1141.43	1141.21	1141.46	1142.15	1142.95	1143.55	1146.51	1145.87	1143.86	1147.92
17	1142.38	1141.83	1141.44	1141.24	1141.50	1142.23	1142.95	1143.54	1147.08	1145.68	1144.09	1147.92
18	1142.37	1141.83	1141.44	1141.20	1141.55	1142.23	1143.01	1143.55	1148.65	1145.50	1144.44	1147.97
19	1142.34	1141.82	1141.50	1141.21	1141.57	1142.27	1143.02	1143.63	1148.91	1145.32	1144.50	1147.88
20	1142.31	1141.82	1141.42	1141.20	1141.62	1142.32	1143.14	1143.75	1148.87	1145.17	1144.45	1147.76
21	1142.28	1141.76	1141.37	1141.20	1141.65	1142.27	1143.17	1143.90	1148.85	1145.04	1144.35	1147.73
22	1142.27	1141.72	1141.40	1141.23	1141.67	1142.28	1143.20	1144.13	1148.93	1144.87	1144.50	1147.63
23	1142.27	1141.72	1141.33	1141.24	1141.80	1142.28	1143.20	1144.28	1149.20	1144.68	1145.63	1147.57
24	1142.25	1141.70	1141.37	1141.25	1141.76	1142.24	1143.20	1144.40	1149.34	1144.62	1146.50	1147.48
25	1142.22	1141.71	1141.36	1141.24	1141.82	1142.27	1143.22	1144.46	1149.21	1144.37	1146.63	1147.40
26	1142.25	1141.83	1141.36	1141.26	1141.83	1142.31	1143.24	1144.51	1149.00	1144.17	1146.50	1147.29
27	1142.23	1141.71	1141.36	1141.28	1141.84	1142.36	1143.26	1144.56	1148.73	1143.98	1146.82	1147.17
28	1142.20	1141.67	1141.37	1141.26	1141.88	1142.54	1143.30	1144.61	1148.43	1143.85	1147.83	1147.11
29	1142.22	1141.64	1141.35	1141.27	---	1142.54	1143.34	1144.75	1148.02	1143.68	1148.53	1147.00
30	1142.24	1141.64	1141.32	1141.26	---	1142.58	1143.34	1145.24	1147.68	1143.61	1148.33	1147.94
31	1142.21	---	1141.30	1141.26	---	1142.55	---	1145.41	---	1143.56	1148.13	---
MEAN	1142.38	1141.91	1141.45	1141.26	1141.50	1142.19	1142.97	1143.88	1147.21	1145.47	1144.94	1147.37
MAX	1142.54	1142.23	1141.60	1141.34	1141.88	1142.58	1143.34	1145.41	1149.34	1147.35	1148.53	1147.97
MIN	1142.20	1141.64	1141.30	1141.20	1141.27	1141.84	1142.53	1143.36	1145.52	1143.56	1143.34	1146.37
(+)	380,900	372,300	367,200	366,600	375,900	386,100	398,400	431,900	470,800	401,900	478,700	475,400
(‡)	-4,000	-8,600	-5,100	-600	+9,300	+10,200	+12,300	+33,500	+38,900	-68,900	+76,800	-3,300

CAL YR 1976 .... (‡) -49,300
WTR YR 1977 .... (‡) +90,500

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

06857100 REPUBLICAN RIVER BELOW MILFORD DAM, KS

LOCATION.--Lat 39°04'15", long 96°52'00", Geary County, Hydrologic Unit 10250017, at downstream side of bridge on U.S. Highway 77, 1.7 mi (2.7 km) below Milford Dam, 2.5 mi (4.0 km) northwest of Junction City, and at mile 6.0 (9.7 km).

DRAINAGE AREA.--24,890 mi² (64,470 km²), of which a large area is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,052.50 ft (320,802 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good except those for June and July, which are fair. Flow completely regulated since 1967 by Milford Lake 1.7 mi (2.7 km) upstream (see sta 06857050).

AVERAGE DISCHARGE.--14 years, 848 ft³/s (24.02 m³/s), 614,400 acre-ft/yr (758 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s (487 m³/s) June 22, 1964, gage height, 22.10 ft (6.736 m), minimum daily, 9.0 ft³/s (0.25 m³/s) Oct. 9, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,870 ft³/s (138 m³/s) Aug. 25, gage height, 12.98 ft (3.956 m); minimum, 34 ft³/s (0.963 m³/s) May 3-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	174	138	171	64	64	54	76	113	3190	860	3820
2	189	174	138	171	64	66	51	53	108	2180	860	3770
3	189	178	138	173	66	68	38	34	101	2170	560	3730
4	193	178	135	168	68	68	41	34	94	2180	362	3690
5	193	178	138	167	66	67	36	44	85	2190	366	3660
6	193	178	138	167	66	68	38	76	78	2240	373	3620
7	146	178	141	167	66	68	38	78	73	2230	367	3590
8	86	178	142	166	66	68	36	76	70	1310	368	3550
9	86	178	141	164	66	69	38	78	62	230	370	3510
10	87	178	139	150	68	70	39	79	59	217	369	1990
11	87	182	138	160	68	68	38	81	55	197	791	802
12	87	182	138	161	68	68	38	84	53	197	1050	726
13	87	185	138	160	64	66	38	87	52	189	1050	471
14	88	185	138	160	64	65	36	89	52	185	1040	152
15	88	182	139	160	64	66	46	93	51	779	1030	150
16	87	182	112	154	64	64	56	96	272	1680	1030	802
17	87	209	145	162	66	62	60	97	596	1680	1350	1330
18	142	230	181	155	66	61	58	101	722	1670	2010	1310
19	181	230	182	160	66	59	56	104	740	1680	2010	1280
20	178	230	181	159	64	59	58	108	1840	1690	2020	1260
21	179	225	178	106	64	58	59	111	3530	1710	2030	1240
22	181	221	178	68	66	60	58	108	3530	1730	2030	1220
23	181	217	178	68	66	47	59	113	3540	1730	2650	1200
24	181	174	178	68	62	46	60	114	3770	1730	3450	1170
25	181	147	178	68	62	44	62	115	4340	1720	4090	1160
26	181	144	178	68	62	44	64	115	4340	1710	4000	1130
27	181	144	180	68	64	45	64	113	4310	1670	2030	1130
28	181	141	179	66	66	49	66	115	4270	1650	2060	1120
29	182	138	178	66	---	44	60	123	4190	1320	2940	1100
30	182	138	170	66	---	44	77	156	4170	874	3920	1150
31	182	---	160	64	---	43	---	126	---	860	3870	---
TOTAL	4655	5458	4815	4031	1826	1838	1522	2877	45266	44788	51306	54833
MEAN	150	182	155	130	65.2	59.3	50.7	92.8	1509	1445	1655	1828
MAX	193	230	182	173	68	70	77	156	4340	3190	4090	3820
MIN	86	138	112	64	62	43	36	34	51	185	362	150
AC-FT	9230	10830	9550	8000	3620	3650	3020	5710	89790	88840	101800	108800

CAL YR 1976 TOTAL 148768 MEAN 406 MAX 2270 MIN 78 AC-FT 295100
WTR YR 1977 TOTAL 223215 MEAN 612 MAX 4340 MIN 34 AC-FT 442700

06858500 NORTH FORK SMOKY HILL RIVER NEAR MCALLASTER, KS

LOCATION.--Lat 39°01'01", long 101°20'51", in NW¼NW¼ sec.17, T.12 S., R.36 W., Logan County, Hydrologic Unit 10260002, on left bank at downstream side of bridge on U.S. Highway 40, 3 mi (5 km) east of McAllaster.

DRAINAGE AREA.--670 mi² (1,740 km²), approximately, of which about 20 mi² (52 km²) is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to September 1953. Occasional low-flow measurements 1954-59 water years. July 1959 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORD.--WSP 1440: 1947(M), 1948.

GAGE.--Water-stage recorder. Datum of gage is 3,070.27 ft (935.818 m) above mean sea level. Jan. 12 to July 17, 1947, nonrecording gage and July 18, 1947, to Sept. 30, 1953, water-stage recorder, at site 2 mi (3 km) upstream at datum 15.75 ft (4.801 m) higher.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--25 years, 4.15 ft³/s (0.118 m³/s), 3,010 acre-ft/yr (3.71 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,700 ft³/s (615 m³/s) June 8, 1962, gage height, 10.40 ft (3.170 m) inside; 11.7 ft (3.57 m) from floodmarks, from rating curve extended above 350 ft³/s (9.91 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 16 ft (4.9 m) former site and datum, date unknown, from information by local resident. Flood in 1930 reached a stage of 14.4 ft (4.39 m) datum at former site at railroad bridge 2 mi (3 km) upstream, from information by Union Pacific Railroad Company (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2.2 ft³/s (0.062 m³/s) May 21, gage height, 5.25 ft (1.600 m), no peak above base of 300 ft³/s (8.50 m³/s); no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.55	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.60	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.40	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.50	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.40	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	6.75	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.22	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	13	.00	.00	.00	.00

CAL YR 1976 TOTAL 4.70 MEAN .013 MAX .79 MIN .00 AC-FT 9.3
WTR YR 1977 TOTAL 6.75 MEAN .018 MAX 1.8 MIN .00 AC-FT 13

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

06859500 LADDER CREEK BELOW CHALK CREEK NEAR SCOTT CITY, KS

LOCATION.--Lat 38°47'20", long 100°52'10", in SW¼SW¼ sec.34, T.14 S., R.32 W., Logan County, Hydrologic Unit 10260004, at downstream side of county highway bridge, 1.3 mi (2.1 km) upstream from mouth, 5.0 mi (8.0 km) downstream from Chalk Creek, and 23 mi (37 km) northeast of Scott City.

DRAINAGE AREA.--1,460 mi² (3,780 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,637.73 ft (803.980 m) above mean sea level. Prior to Oct. 17, 1951, nonrecording gage, and Oct. 17, 1951, to June 14, 1977, water-stage recorder, at site 600 ft (180 m) upstream and datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--26 years, 8.52 ft³/s (0.241 m³/s), 6,170 acre-ft/yr (7.61 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Aug. 23, 1969, gage height, 16.00 ft (4.877 m), from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of slope-area measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900, 16.1 ft (4.91 m) Aug. 6, 1933, discharge, 30,000 ft³/s (850 m³/s), from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of slope-area measurement at gage height 16.00 ft (4.877 m), augmented by failure of dam at Lake McBride, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 14	2000	* 710	20.1	5.83	1.777	July 15	0900	284	8.04	5.16	1.573
May 18	2100	468	13.3	5.03	1.533	July 25	1300	462	13.1	6.04	1.841
June 23	2400	520	14.7	6.28	1.914	Aug. 5	0300	522	14.8	6.29	1.917

Minimum discharge, no flow Sept. 8, 1977.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.6	2.4	1.6	2.8	1.8	1.1	3.0	1.6	6.0	1.5	.57
2	2.1	1.8	2.5	1.6	2.5	1.8	2.6	2.8	1.5	4.4	1.5	.36
3	2.0	1.4	2.5	1.6	2.5	1.8	1.9	2.6	1.4	3.9	1.5	.32
4	2.1	1.3	2.5	1.6	2.5	1.9	1.6	2.2	1.5	2.0	1.9	.30
5	1.8	1.3	2.6	1.6	2.8	1.9	1.4	3.6	8.2	2.1	112	.33
6	1.7	1.3	2.7	1.6	2.8	2.0	1.1	2.5	16	1.6	6.6	.26
7	1.9	1.3	2.7	1.6	2.8	2.2	.93	1.7	8.6	1.2	3.2	.24
8	1.9	1.2	2.6	1.6	3.0	2.4	.83	1.6	6.3	1.1	2.0	.26
9	1.7	1.7	2.7	1.7	3.0	2.6	.78	1.4	6.0	.89	1.7	.22
10	1.5	1.4	2.7	1.7	3.0	2.8	.98	1.3	5.0	1.0	1.6	.20
11	1.4	1.5	2.3	1.7	3.0	3.6	3.5	2.1	3.9	.76	2.5	.22
12	1.4	1.8	2.3	1.7	2.8	2.8	4.1	1.9	3.4	.65	1.6	.17
13	1.2	1.6	2.3	1.8	2.6	2.3	4.4	1.5	3.0	.45	1.3	.08
14	1.1	2.1	2.5	1.8	2.4	2.4	2.6	85	2.9	.89	1.2	.10
15	.97	2.3	2.5	1.8	2.2	2.7	2.5	97	1.7	97	1.1	.04
16	.95	1.8	2.4	1.9	2.3	1.4	2.9	21	2.1	42	1.0	.05
17	.78	1.7	2.6	1.9	2.4	3.6	2.7	10	1.5	26	1.1	.08
18	1.9	1.7	2.6	2.0	2.2	3.4	2.3	57	1.1	6.7	7.4	.08
19	2.3	1.7	2.7	2.0	2.0	2.0	2.1	128	1.5	2.5	8.3	.05
20	1.4	1.7	2.1	2.1	1.9	1.7	2.9	33	1.6	2.1	4.8	.02
21	1.3	1.7	2.2	2.3	2.1	1.3	3.8	22	8.6	17	3.7	.43
22	1.2	1.6	2.4	2.2	2.4	1.5	3.0	18	1.9	3.7	2.7	1.2
23	1.2	2.0	2.4	2.3	3.2	1.1	3.3	9.3	10	1.8	2.2	.55
24	1.2	2.0	2.7	2.5	2.8	1.3	3.2	6.3	94	1.3	1.5	.25
25	1.2	2.0	2.7	2.6	2.3	2.8	2.9	9.0	49	128	1.4	.21
26	1.3	2.1	2.8	2.7	2.1	2.5	2.8	3.4	34	49	1.3	.20
27	2.0	1.7	3.0	2.7	2.0	2.3	2.6	2.8	31	17	.55	.20
28	1.9	1.8	3.0	2.7	1.9	1.8	2.8	2.3	13	4.7	.86	.21
29	2.1	1.9	3.0	2.6	---	1.3	2.8	2.1	4.7	2.8	.39	.25
30	2.4	2.1	3.0	2.5	---	1.2	2.7	1.8	12	2.1	.44	.23
31	1.8	---	1.7	2.5	---	1.1	---	1.8	---	1.8	.41	---
TOTAL	50.00	51.1	79.3	62.5	70.3	65.3	73.12	538.0	337.4	432.44	179.25	7.68
MEAN	1.61	1.70	2.56	2.02	2.51	2.11	2.44	17.4	11.2	13.9	5.78	.26
MAX	2.4	2.3	3.0	2.7	3.2	3.6	4.4	128	94	128	112	1.2
MIN	.78	1.2	1.7	1.6	1.9	1.1	.78	1.3	1.1	.45	.39	.02
AC-FT	99	101	157	124	139	130	145	1070	669	858	356	15

CAL YR 1976 TOTAL 1568.76 MEAN 4.29 MAX 224 MIN .00 AC-FT 3110
WTR YR 1977 TOTAL 1946.39 MEAN 5.33 MAX 128 MIN .02 AC-FT 3860

06859500 LADDER CREEK BELOW CHALK CREEK NEAR SCOTT CITY, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY					
19...	1410	116	390	1570	492
JUN					
09...	1050	5.4	520	645	9.4
JUL					
15...	1120	118	350	2460	784

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM
JUL							
15...	1120	118	2460	62	83	98	100

06860000 SMOKY HILL RIVER AT ELKADER, KS

LOCATION.--Lat 38°47'33", long 100°51'19", in NE¼SE¼ sec.34, T.14 S., R.32 W., Logan County, Hydrologic Unit 10260003, at downstream side of bridge on U.S. Highway 83 at Elkader, 0.1 mi (0.2 km) downstream from Ladder Creek, and at mile 409.9 (659.5 km).

DRAINAGE AREA.--3,555 mi² (9,207 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1310: 1941(M), 1947(M), 1949(M). WSP 1510: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,624.62 ft (799.984 m) above mean sea level. Prior to Oct. 1, 1964, water-stage recorder at same site and datum.

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--38 years, 34.4 ft³/s (0.974 m³/s), 24,920 acre-ft/yr (30.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,300 ft³/s (632 m³/s) Aug. 23, 1969, gage height, 8.85 ft (2.698 m); maximum gage height, 9.02 ft (2.794 m) June 17, 1955; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 13.2 ft (4.02 m) May 30, 1938, from floodmark, discharge, 71,000 ft³/s (2,010 m³/s), on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
July 25	0400	* 2,460	69.7	4.73	1.442
Aug. 5	0600	800	22.7	3.70	1.128

Minimum discharge, 0.13 ft³/s (0.004 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	1.6	1.8	1.0	2.5	1.6	1.3	2.3	2.7	6.6	.69	1.0
2	2.4	1.8	1.8	1.1	2.4	1.9	1.9	2.4	2.4	4.5	.49	.90
3	2.3	1.6	1.9	1.1	2.5	2.0	1.9	2.2	2.5	4.0	.44	.80
4	2.2	1.5	1.8	1.1	2.7	2.0	1.5	2.1	2.6	3.0	.65	.70
5	2.1	1.5	2.0	1.1	2.8	2.3	1.3	2.3	8.9	2.2	201	.60
6	1.7	1.3	1.9	1.2	2.8	2.1	1.1	2.8	34	1.6	11	.50
7	1.9	1.3	1.6	1.2	2.8	2.0	1.0	1.6	17	1.4	3.8	.30
8	2.0	1.3	1.7	1.2	2.8	1.9	.98	1.4	10	1.2	2.6	.24
9	1.6	1.7	1.7	1.2	2.7	1.9	.98	1.3	7.6	.96	2.3	.19
10	1.6	1.6	1.5	1.3	2.7	1.9	.99	1.2	5.0	1.1	8.3	.22
11	1.4	1.3	1.3	1.3	2.6	2.1	2.1	1.5	4.3	.81	393	.21
12	1.2	1.7	1.4	1.3	2.6	2.5	2.9	1.6	3.7	.70	94	.21
13	1.1	1.5	1.5	1.3	2.5	2.3	3.3	1.6	3.2	.47	17	.20
14	1.0	1.7	1.7	1.4	2.3	2.0	2.5	100	2.8	.42	6.5	.16
15	.86	2.3	1.8	1.5	2.2	2.4	2.2	84	2.4	64	3.6	.18
16	.85	1.7	1.4	1.6	2.3	1.7	2.5	22	2.2	14	2.1	.18
17	.73	1.5	1.5	1.6	2.4	2.1	2.4	11	2.2	5.8	1.9	.16
18	1.3	1.6	1.5	1.5	2.2	3.3	2.5	61	2.1	2.6	4.4	.15
19	2.5	1.5	1.4	1.5	2.1	2.1	1.9	123	1.8	.89	7.8	.13
20	1.7	1.6	1.2	1.6	2.0	1.7	2.2	42	1.7	.50	4.8	.15
21	1.4	1.5	1.1	2.0	2.1	1.5	3.0	26	8.6	4.1	3.7	.21
22	1.3	1.5	1.2	2.3	2.3	1.6	2.7	22	1.9	2.4	3.4	1.9
23	1.3	1.6	1.4	2.6	2.1	1.4	2.6	13	13	1.4	3.0	1.3
24	1.2	1.8	1.5	2.7	1.8	1.4	2.6	9.7	91	.92	2.6	.59
25	1.2	1.7	1.6	2.8	1.5	2.3	2.3	25	52	530	2.2	.44
26	1.3	2.1	1.6	2.7	1.5	2.5	2.2	8.4	33	56	1.8	.44
27	1.9	1.9	1.8	2.8	1.6	2.4	2.0	5.3	31	12	1.6	.35
28	2.0	1.4	1.8	2.5	1.6	1.9	1.9	4.2	12	3.8	1.5	.42
29	2.0	1.5	1.5	2.9	---	1.5	2.3	3.5	4.7	2.1	1.3	.54
30	2.5	1.6	1.5	2.6	---	1.3	2.3	3.2	12	1.3	1.2	.56
31	1.9	---	1.3	2.7	---	1.2	---	3.1	---	.91	1.1	---
TOTAL	51.24	48.2	48.7	54.7	64.4	60.8	61.35	590.7	378.3	731.68	789.77	13.93
MEAN	1.65	1.61	1.57	1.76	2.30	1.96	2.05	19.1	12.6	23.6	25.5	.46
MAX	2.8	2.3	2.0	2.9	2.8	3.3	3.3	123	91	530	393	1.9
MIN	.73	1.3	1.1	1.0	1.5	1.2	.98	1.2	1.7	.42	.44	.13
AC-FT	102	96	97	108	128	121	122	1170	750	1450	1570	28

CAL YR 1976 TOTAL 1560.35 MEAN 4.26 MAX 254 MIN .00 AC-FT 3090
WTR YR 1977 TOTAL 2893.77 MEAN 7.93 MAX 530 MIN .13 AC-FT 5740

06861000 SMOKY HILL RIVER NEAR ARNOLD, KS

LOCATION.--Lat 38°48'31", long 100°01'13", in SW¼NW¼ sec.29, T.14 S., R.24 W., Trego County, Hydrologic Unit 10260003, on right bank near downstream side of highway bridge, 7.0 mi (11.3 km) upstream from headwaters of Cedar Bluff Reservoir, 12 mi (19.3 km) north of Arnold, and at mile 356.2 (573.1 km).

DRAINAGE AREA.--5,220 mi² (13,520 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1950 to current year. Prior to October 1950, published as "near Ransom".

GAGE.--Water-stage recorder. Datum of gage is 2,196.13 ft (669.380 m) above mean sea level. See WSP 1919 for history of changes prior to Sept. 30, 1961.

REMARKS.--Records good except those for winter periods and periods of no gage-height record, Mar. 19 to Apr. 21 and Aug. 11 to Sept. 13, which are poor.

AVERAGE DISCHARGE.--27 years, 67.4 ft³/s (1.909 m³/s), 48,830 acre-ft/yr (60.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft³/s (674 m³/s) June 11, 1951, gage height, 12.57 ft (3.831 m), site and datum then in use; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1938 reached a stage of about 19 ft (5.8 m), present site and datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,440 ft³/s (69.1 m³/s) Aug. 5, gage height, 5.79 ft (1.765 m), no other peak above base of 1,800 ft³/s (51.0 m³/s); minimum, 0.02 ft³/s (0.001 m³/s) July 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	1.4	1.1	.60	3.0	1.5	.60	1.9	8.2	5.3	1.2	2.9
2	2.4	1.1	1.2	.40	3.0	1.6	.70	2.0	6.7	2.3	2.2	2.9
3	2.2	.97	1.4	.30	3.0	1.5	.90	3.5	5.0	1.5	4.5	2.9
4	2.0	.82	1.3	.20	3.5	1.6	1.1	2.0	4.0	.71	6.2	2.6
5	1.8	.83	1.3	.10	3.3	1.4	1.1	1.6	3.5	.28	990	2.6
6	1.6	.94	1.0	.10	3.3	1.6	.90	1.2	3.8	.50	234	2.6
7	1.7	.80	.99	.10	2.5	1.6	.70	1.1	2.8	.33	101	2.3
8	1.4	.67	.92	.10	3.1	1.8	.50	1.0	2.4	.38	35	2.3
9	1.4	.61	1.0	.10	3.3	1.8	.40	.94	2.1	.27	19	2.0
10	1.4	.67	.85	.10	3.4	1.8	.40	.82	1.7	.05	9.2	2.0
11	1.4	.67	.72	.12	3.4	1.8	.40	.67	1.6	.04	67	1.8
12	1.1	.60	.76	.15	3.4	2.0	.60	.67	1.3	.06	97	1.8
13	.97	.57	.82	.18	3.5	1.9	.80	.67	1.5	.06	85	1.4
14	.94	.57	.91	.20	3.4	1.7	1.0	.63	.85	.06	68	1.4
15	.83	.73	1.1	.25	2.7	1.6	1.1	.61	.45	.61	51	1.3
16	.79	.83	.99	.30	2.4	1.1	1.0	.53	.38	2.7	35	1.1
17	.79	.79	1.3	.40	2.9	1.1	1.0	.52	.33	.16	20	.84
18	.78	.91	1.1	.50	2.4	1.1	1.1	2.9	.33	.03	10	.67
19	.67	.94	1.2	.55	2.3	1.0	2.0	112	.11	.03	8.0	.67
20	.67	.82	.73	.85	2.0	1.1	8.0	21	2.5	.03	7.0	.67
21	.67	.77	.74	1.5	2.1	1.0	13	59	43	.88	6.0	.67
22	.67	.77	.86	2.2	2.2	.90	25	34	13	.32	6.0	.67
23	.67	.94	.88	2.9	2.6	.80	19	20	6.1	20	5.6	.61
24	.67	.94	1.2	3.4	2.1	.70	8.3	11	4.5	2.0	5.3	.57
25	.67	.94	1.3	3.6	1.8	.60	4.6	49	4.7	1.7	10	.57
26	1.3	1.0	1.2	3.9	1.6	.70	3.5	105	4.3	1.4	8.0	.57
27	3.1	1.7	1.6	4.9	1.5	.80	2.8	30	9.5	5.4	6.0	.49
28	3.4	.69	1.6	5.0	1.4	1.1	2.6	25	6.1	25	5.3	.47
29	2.7	.55	1.2	4.8	---	1.1	2.3	18	3.2	9.2	4.2	.66
30	2.6	.72	1.0	3.1	---	.90	2.3	13	6.3	3.2	3.2	.67
31	1.8	---	.80	3.0	---	.70	---	12	---	1.7	2.9	---
TOTAL	45.79	25.26	33.09	43.90	75.1	39.90	107.70	532.26	150.25	86.20	1912.8	42.70
MEAN	1.48	.84	1.07	1.42	2.68	1.29	3.59	17.2	5.01	2.78	61.7	1.42
MAX	3.4	1.7	1.6	5.0	3.5	2.0	25	112	43	25	990	2.9
MIN	.67	.55	.72	.10	1.4	.60	.40	.52	.11	.03	1.2	.47
AC-FT	91	50	66	87	149	79	214	1060	298	171	3790	85

CAL YR 1976 TOTAL 4861.00 MEAN 13.3 MAX 829 MIN .05 AC-FT 9640
WTR YR 1977 TOTAL 3094.95 MEAN 8.48 MAX 990 MIN .03 AC-FT 6140

06861500 CEDAR BLUFF RESERVOIR NEAR ELLIS, KS

LOCATION.--Lat 38°47'24", long 99°43'13", in NE¼SW¼ sec.36, T.14 S., R.22 W., Trego County, Hydrologic Unit 10260003, in control house structure of outlet works conduit at dam on Smoky Hill River, 18 mi (29 km) southwest of Ellis, and at mile 333.7 (536.9 km). Water-quality sampling site at outlet to fish hatchery.

DRAINAGE AREA.--5,530 mi² (14,300 km²), approximately.

ELEVATION RECORDS

PERIOD OF RECORD.--November 1950 to current year (monthly records only prior to August 1960).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Aug. 20, 1960, nonrecording mercury-column gage at same site and datum.

REMARKS.--Reservoir is formed by compacted earthfill dam; storage began Nov. 13, 1950; dam was completed in 1951. Total capacity, 870,400 acre-ft (1,070 hm³), consisting of the following: Dead storage, 8,260 acre-ft (10.2 hm³) below elevation 2,090 ft (637.0 m), sill of trashrack structure; irrigation pool, 176,800 acre-ft (218 hm³) between elevations 2,090 ft (637.0 m) and 2,144 ft (653.5 m); spillway; and uncontrolled storage, 493,400 acre-ft (608 hm³) between elevations 2,166 ft (660.2 m) and 2,200 ft (670.6 m). Reservoir is used to store water for flood control, irrigation of 6,600 acres (26.7 km²), and recreation. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 2,154.90 ft (656.814 m) July 2, 1951, July 4, 5, 1957, contents, 269,400 acre-ft (332 hm³); minimum elevation since irrigation pool was first filled, 2,118.17 ft (645.618 m) Aug. 4, 1977, contents, 61,400 acre-ft (75.7 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,124.57 ft (647.569 m) Oct. 1, 2, contents, 82,900 acre-ft (102 hm³); minimum, 2,118.17 ft (645.618 m) Aug. 4, contents, 61,400 acre-ft (75.7 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)

2,118	60,860	2,123	77,200
2,119	63,890	2,125	84,600
2,121	70,300		

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2124.57	2124.37	2124.06	2123.90	2123.73	2123.65	2123.40	2123.53	2123.39	2121.62	2118.33	2119.79
2	2124.57	2124.33	2124.06	2123.90	2123.74	2123.75	2123.39	2123.52	2123.38	2121.51	2118.30	2119.78
3	2124.56	2124.32	2124.06	2123.88	2123.75	2123.67	2123.37	2123.51	2123.37	2121.42	2118.22	2119.75
4	2124.51	2124.29	2124.06	A	2123.75	2123.65	2123.36	2123.48	2123.35	2121.28	2118.17	2119.75
5	2124.45	2124.30	2124.05		2123.74	2123.64	2123.36	2123.44	2123.35	2121.15	2118.48	2119.75
6	2124.40	2124.28	2124.03		2123.74	2123.65	2123.40	2123.41	2123.30	2121.07	2118.79	2119.74
7	2124.40	2124.28	2124.03		2123.74	2123.68	2123.42	2123.40	2123.23	2120.92	2118.95	2119.73
8	2124.45	2124.28	2124.03		2123.75	2123.70	2123.43	2123.38	2123.21	2120.80	2119.03	2119.67
9	2124.43	2124.28	2124.02		2123.75	2123.70	2123.43	2123.33	2123.17	2120.68	2119.05	2119.68
10	2124.45	2124.27	2124.02		2123.75	2123.65	2123.42	2123.27	2123.11	2120.60	2119.04	2119.67
11	2124.45	2124.21	2124.02		2123.75	2123.64	2123.37	2122.22	2123.00	2120.48	2119.05	2119.65
12	2124.44	2124.18	2124.00		2123.75	2123.61	2123.36	2123.20	2122.90	2120.37	2119.37	2119.65
13	2124.43	2124.16	2124.02		2123.75	2123.63	2123.35	2123.17	2122.85	2120.24	2119.70	2119.62
14	2124.42	2124.16	2124.01		2123.74	2123.65	2123.37	2123.17	2122.82	2120.10	2119.83	2119.58
15	2124.38	2124.16	2124.01		2123.74	2123.63	2123.37	2123.13	2122.71	2120.01	2119.88	2119.53
16	2124.34	2124.17	2124.01		2123.76	2123.60	2123.37	2123.10	2122.60	2119.89	2119.87	2119.52
17	2124.27	2124.21	2124.01		2123.78	2123.62	2123.36	2123.07	2122.51	2119.76	2119.88	2119.50
18	2124.28	2124.21	2124.02		2123.78	2123.50	A	2123.07	2122.40	2119.61	2119.85	2119.44
19	2124.22	2124.18	2123.99		2123.77	2123.54		2123.08	2122.30	2119.42	2119.86	2119.40
20	2124.21	2124.17	2123.97		2123.77	2123.52		2123.08	2122.23	2119.28	2119.87	2119.35
21	2124.21	2124.15	2123.97		2123.79	2123.50		2123.15	2122.27	2119.14	2119.85	2119.33
22	2124.22	2124.11	2123.97		2123.80	2123.52		2123.14	2122.23	2119.08	2119.92	2119.27
23	2124.23	2124.13	2123.96	A	2123.77	2123.53		2123.17	2122.20	2119.00	2119.92	2119.25
24	2124.20	2124.13	2123.96	2123.78	2123.74	2123.53		2123.17	2122.15	2118.90	2119.90	2119.20
25	2124.18	2124.13	2123.96	2123.78	2123.70	2123.55	A	2123.18	2122.10	2118.79	2119.90	2119.17
26	2124.24	2124.10	2123.97	2123.78	2123.70	2123.53	2123.45	2123.19	2122.06	2118.73	2119.90	2119.16
27	2124.25	2124.09	2123.97	2123.78	2123.70	2123.52	2123.52	2123.27	2122.01	2118.66	2119.85	2119.15
28	2124.27	2124.07	2123.95	2123.75	2123.68	2123.51	2123.48	2123.33	2121.92	2118.63	2119.84	2119.12
29	2124.27	2124.07	2123.94	2123.75	---	2123.45	2123.46	2123.36	2121.85	2118.58	2119.80	2119.12
30	2124.32	2124.07	2123.92	2123.73	---	2123.42	2123.44	2123.38	2121.73	2118.50	2119.84	2119.12
31	2124.32	---	2123.92	2123.73	---	2123.40	---	2123.37	---	2118.41	2119.80	---
MEAN	2124.35	2124.20	2124.00	---	2123.75	2123.59	---	2123.23	2122.66	2119.89	2119.42	2119.48
MAX	2124.57	2124.37	2124.06	2123.90	2123.80	2123.75	2123.52	2123.53	2123.39	2121.62	2119.92	2119.79
MIN	2124.18	2124.07	2123.92	2123.73	2123.68	2123.40	2123.35	2122.22	2121.73	2118.41	2118.17	2119.12
(+)	82,000	81,100	80,500	79,800	79,600	78,600	78,800	78,500	72,800	62,400	66,400	64,300
(‡)	-900	-900	-600	-700	-200	-1,000	+200	-300	-5,700	-10,400	+4,000	-2,100

CAL YR 1976 .... (‡) -26,400
WTR YR 1977 .... (‡) -18,600

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.
A NO GAGE-HEIGHT RECORD.

06861500 CEDAR BLUFF RESERVOIR NEAR ELLIS, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

REMARKS.--Samples are collected at outlet to fish hatchery. Dissolved oxygen is from reservoir pool north shore close to dam. Chemical analyses for water years 1962-75 were published as 06862000, Smoky Hill River at Cedar Bluff Dam.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	RESERVOIR STORAGE (AC-FT)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	HARDNESS (CA,MG) (MG/L)
OCT 27...	81740	1150	7.7	10.5	3	11.2	82	<1	82	510
FEB 16...	79940	1250	7.8	3.0	1	12.2	<1	<1	<1	540
APR 26...	78810	1280	8.7	14.0	--	11.0	--	<1	<1	540
SEP 09...	66020	1210	8.2	23.0	--	--	0	0	<20	510

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT 27...	400	150	32	51	1.0	20	131	0	470
FEB 16...	430	160	35	51	1.0	20	134	0	530
APR 26...	430	160	34	53	1.0	20	130	0	490
SEP 09...	420	150	34	50	1.0	21	120	0	500

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT 27...	35	.7	7.0	856	1.16	.01	140	20	10
FEB 16...	40	.6	5.5	913	1.24	.02	130	10	20
APR 26...	37	.7	4.5	890	1.21	.01	140	20	10
SEP 09...	37	.8	6.7	877	1.19	.02	140	10	0

06862000 SMOKY HILL RIVER AT CEDAR BLUFF DAM, KS

LOCATION.--Lat 38°47'30", long 99°43'20", in NW¼NE¼ sec.1, T.15 S., R.22 W., Trego County, Hydrologic Unit 10260003, on right bank 0.2 mi (0.3 km) downstream from Cedar Bluff Dam, 14 mi (23 km) southwest of Ellis, and at mile 333.4 (536.4 km).

DRAINAGE AREA.--5,530 mi² (14,320 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1952 to current year.

REVISED RECORDS.--WSP 1510: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,059.14 ft (627.626 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Records fair. Flow completely regulated by Cedar Bluff Reservoir (see sta 06861500). Prior to Nov. 21, 1962, fish hatchery effluent was included in gaged flow.

AVERAGE DISCHARGE.--25 years, 31.9 ft³/s (0.903 m³/s), 23,110 acre-ft/yr (28.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,010 ft³/s (56.9 m³/s) July 5, 1957, gage height, 4.89 ft (1.490 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28 ft³/s (1.79 m³/s) July 29, 30, gage height, 1.80 ft (0.549 m), no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.24	.03	.00	.00	.00	.00	.00	.33	.31	28	.51
2	1.2	.24	.02	.00	.00	.00	.00	.05	.33	.29	22	.45
3	1.2	.24	.01	.00	.00	.00	.00	.05	.31	.22	2.4	.45
4	1.2	.24	.00	.00	.00	.00	.00	.04	.29	.20	1.5	.48
5	1.2	.24	.00	.00	.00	.00	.00	.00	.29	.19	2.4	.48
6	1.3	.24	.00	.00	.00	.00	.00	.00	.29	.16	1.4	.48
7	1.3	.22	.00	.00	.00	.00	.00	.00	.31	.19	1.2	.43
8	1.1	.22	.00	.00	.00	.00	.00	.00	.29	3.2	.95	.39
9	1.1	.21	.00	.02	.00	.00	.00	.00	.27	12	.83	.31
10	1.1	.19	.00	.03	.00	.00	.00	.00	.22	14	.75	.29
11	1.0	.18	.00	.00	.00	.00	.00	.00	.22	14	1.1	.29
12	1.0	.16	.00	.00	.00	.00	.00	.00	.22	14	.87	.38
13	.69	.16	.00	.00	.00	.00	.00	.00	.29	15	.79	.51
14	.54	.16	.00	.02	.00	.00	.00	.00	.31	15	.72	.37
15	.43	.18	.00	.08	.00	.00	.00	.00	.31	16	.69	.33
16	.37	.14	.00	.03	.00	.00	.00	.00	.29	24	.63	.33
17	.33	.13	.00	.00	.00	.00	.00	.00	.27	25	.66	.33
18	.33	.12	.00	.00	.00	.00	.00	.00	.27	25	.66	.31
19	.29	.09	.00	.00	.00	.00	.00	.00	.27	26	.66	.31
20	.27	.08	.00	.00	.00	.00	.00	.00	.31	26	.66	.31
21	.27	.08	.00	.00	.00	.00	.00	.06	.54	26	.63	.31
22	.27	.07	.00	.00	.00	.00	.00	.12	.41	26	.84	.31
23	.27	.07	.00	.00	.00	.00	.00	.18	.35	26	.99	.39
24	.25	.07	.00	.01	.00	.00	.00	.19	.41	26	.75	.39
25	.22	.07	.00	.00	.00	.00	.00	.20	.48	26	.69	.35
26	.27	.07	.00	.00	.00	.00	.00	.25	.41	27	.60	.33
27	.35	.08	.00	.00	.00	.00	.00	.29	.37	28	.69	.31
28	.31	.06	.00	.00	.00	.00	.00	.33	.33	28	.75	.27
29	.33	.05	.00	.00	---	.00	.00	.31	.33	28	.60	.31
30	.31	.05	.00	.00	---	.00	.00	.33	.33	28	.57	.33
31	.25	---	.00	.00	---	.00	---	.33	---	28	.54	---
TOTAL	20.25	4.35	.06	.19	.00	.00	.00	2.73	9.65	527.76	76.52	11.04
MEAN	.65	.15	.002	.006	.000	.000	.000	.088	.32	17.0	2.47	.37
MAX	1.3	.24	.03	.08	.00	.00	.00	.33	.54	28	28	.51
MIN	.22	.05	.00	.00	.00	.00	.00	.00	.22	.16	.54	.27
AC-FT	40	8.6	.1	.4	.00	.00	.00	5.4	19	1050	152	22

CAL YR 1976 TOTAL 791.65 MEAN 2.16 MAX 42 MIN .00 AC-FT 1570
WTR YR 1977 TOTAL 652.55 MEAN 1.79 MAX 28 MIN .00 AC-FT 1290

06862700 SMOKY HILL RIVER NEAR SCHOENCHEN, KS

LOCATION.--Lat 38°43'30", long 99°23'30", in NW¼NW¼ sec.25, T.15 S., R.19 W., Ellis County, Hydrologic Unit 10260006, on left bank, 3.0 mi (4.8 km) northwest of Schoenchen, and at mile 312.3 (502.5 km).

DRAINAGE AREA.--5,750 mi² (14,890 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,940 ft (591.3 m), from topographic map.

REMARKS.--Records fair. Flow mostly regulated by Cedar Bluff Reservoir 21.4 mi (34.4 km) upstream (see sta 06861500).

AVERAGE DISCHARGE.--13 years, 32.2 ft³/s (0.912 m³/s), 24,330 acre-ft/yr (30.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft³/s (578 m³/s) June 14, 1970, gage height, 16.17 ft (4.929 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Jan. 16-20, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 200 ft³/s (5.66 m³/s) Aug. 6, gage height, 4.65 ft (1.417 m); no peaks above regulated base of 400 ft³/s (11.3 m³/s); minimum, 4.0 ft³/s (0.11 m³/s) July 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	22	22	16	20	16	17	20	14	9.4	37	13
2	19	22	23	16	22	17	17	20	13	8.1	35	12
3	18	22	22	18	25	17	18	20	13	7.8	34	12
4	19	22	22	16	25	16	19	19	12	6.6	37	13
5	19	20	21	18	25	16	18	18	11	5.8	46	12
6	19	20	20	18	24	16	18	20	10	4.6	147	11
7	19	20	20	18	22	16	17	18	9.9	4.3	103	11
8	19	20	21	18	23	16	17	17	9.8	4.1	63	11
9	19	20	20	16	22	16	17	16	9.9	4.7	48	10
10	19	20	20	18	22	16	16	17	8.7	6.6	39	11
11	18	20	18	18	22	16	15	19	10	7.0	102	11
12	18	20	19	16	22	17	15	17	9.3	8.3	62	14
13	19	20	20	18	22	17	16	16	10	7.9	43	12
14	18	20	19	18	22	17	16	17	10	7.8	34	13
15	18	20	20	16	21	16	15	17	9.5	9.7	30	13
16	19	20	20	16	20	16	15	16	8.5	11	25	12
17	19	20	20	16	20	16	15	17	9.7	9.7	25	11
18	20	20	20	16	19	16	15	16	10	11	20	10
19	19	20	19	18	18	16	15	15	9.5	13	20	11
20	19	20	19	18	17	16	20	16	12	13	30	12
21	19	20	18	20	18	16	22	20	16	17	40	12
22	20	20	18	20	17	16	28	20	16	21	35	13
23	20	20	19	20	18	17	25	17	12	48	31	15
24	20	20	19	20	17	17	22	16	10	31	25	13
25	20	20	18	20	16	17	21	15	14	28	21	10
26	21	20	18	20	16	17	20	15	12	78	18	9.9
27	25	19	17	18	16	17	19	16	11	58	15	9.6
28	26	18	17	16	16	20	18	16	11	45	19	10
29	24	18	17	16	---	19	18	19	10	40	16	12
30	24	20	16	16	---	18	18	16	9.5	37	15	13
31	24	---	16	18	---	17	---	15	---	36	14	---
TOTAL	619	603	598	550	567	516	542	536	331.3	599.4	1229	352.5
MEAN	20.0	20.1	19.3	17.7	20.3	16.6	18.1	17.3	11.0	19.3	39.6	11.8
MAX	26	22	23	20	25	20	28	20	16	78	147	15
MIN	18	18	16	16	16	16	15	15	8.5	4.1	14	9.6
AC-FT	1230	1200	1190	1090	1120	1020	1080	1060	657	1190	2440	699

CAL YR 1976 TOTAL 7348.6 MEAN 20.1 MAX 267 MIN 8.5 AC-FT 14580
WTR YR 1977 TOTAL 7043.2 MEAN 19.3 MAX 147 MIN 4.1 AC-FT 13970

06863500 BIG CREEK NEAR HAYS, KS

LOCATION.--Lat 38°48'45", long 99°15'14", in NW¼NW¼NE¼ sec.30, T.14 S., R.17 W., Ellis County, Hydrologic Unit 10260007, at downstream side of county highway bridge, 0.6 mi (1.0 km) east of Munjor, 6.0 mi (9.7 km) southeast of Hays, and at mile 31.7 (51.0 km).

DRAINAGE AREA.--594 mi² (1,540 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1946 to current year.

REVISED RECORDS.--WSP 1340: 1947-48(P).

GAGE.--Water-stage recorder. Altitude of gage is 1,915 ft (583.7 m), from topographic map. Prior to November 20, 1947, nonrecording gage, and Nov. 20, 1947, to Aug. 22, 1965, water-stage recorder and concrete control at site 12.5 mi (20.1 km) upstream at datum 1,955.13 ft (595.924 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--31 years, 40.2 ft³/s (1.138 m³/s), 29,120 acre-ft/yr (35.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s (634 m³/s) June 17, 1957, gage height, 22.07 ft (6.727 m), site and datum then in use; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1908, that of June 17, 1957, from engineering report by Servis, Van Doren and Hazard Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 533 ft³/s (15.1 m³/s) Aug. 6, gage height, 9.87 ft (3.008 m), no peak above base of 700 ft³/s (19.8 m³/s); minimum, 0.44 ft³/s (0.012 m³/s) July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	8.9	8.3	5.4	7.4	8.6	5.6	9.7	18	4.4	11	6.4
2	13	9.1	7.7	5.4	7.3	8.4	5.5	10	15	3.4	14	5.9
3	11	8.7	7.6	5.2	7.3	9.0	5.7	12	12	2.7	8.5	5.7
4	14	8.0	7.8	5.2	7.4	8.3	7.5	9.0	11	3.0	7.6	6.0
5	11	8.2	7.6	5.2	7.5	8.3	6.5	9.0	9.3	1.7	246	5.3
6	11	8.3	7.2	5.2	7.6	8.4	6.0	8.8	8.1	2.5	374	5.4
7	9.3	8.2	7.3	5.2	7.6	8.3	5.9	7.9	7.3	3.1	177	5.6
8	9.5	7.4	7.1	5.2	7.7	8.7	5.5	7.3	6.7	4.0	41	5.4
9	8.8	7.4	7.0	5.2	8.0	8.6	5.5	7.5	5.5	2.4	25	4.9
10	8.5	7.8	7.6	5.2	8.2	8.3	5.4	14	5.1	3.7	19	4.7
11	7.8	7.4	7.7	5.1	8.4	7.8	4.4	28	3.9	5.7	76	4.7
12	7.2	7.0	7.6	5.1	8.6	7.6	4.2	38	4.1	4.2	43	5.2
13	6.6	7.2	6.8	5.1	9.2	7.4	4.4	21	4.0	3.9	18	4.9
14	6.8	7.1	7.3	5.0	10	7.4	4.3	17	5.8	3.7	15	4.7
15	6.7	6.8	6.9	5.0	10	7.7	4.4	15	4.9	3.5	11	5.2
16	6.5	7.2	7.1	5.0	9.7	7.4	5.0	12	4.2	3.1	9.1	6.3
17	6.4	7.3	7.4	5.0	10	7.5	4.2	10	4.0	2.5	8.2	6.0
18	6.5	6.9	6.7	5.2	9.6	7.0	4.3	9.5	3.6	2.6	7.8	5.3
19	7.2	6.8	7.1	5.4	9.3	6.8	4.5	8.6	3.5	1.8	7.1	4.5
20	6.9	6.9	6.6	5.8	8.9	6.4	10	6.1	4.4	1.9	7.1	4.6
21	6.7	6.9	6.1	6.2	9.2	6.0	13	20	7.0	3.3	6.6	4.4
22	7.1	6.7	6.9	6.6	9.5	6.2	19	11	15	4.4	34	4.2
23	7.3	6.9	6.6	7.2	9.9	6.5	15	8.1	5.3	4.5	31	4.0
24	7.1	6.9	6.9	7.8	9.1	6.7	10	8.4	6.0	4.4	10	6.7
25	6.9	7.1	6.6	8.4	8.2	6.5	9.5	11	6.7	5.6	9.5	4.2
26	7.6	6.8	6.1	8.6	8.7	6.0	9.7	12	6.4	47	43	3.5
27	13	6.2	6.3	9.0	9.4	6.0	10	10	5.4	292	15	3.6
28	12	6.0	6.6	8.8	9.0	6.8	10	9.7	5.0	88	33	3.7
29	8.6	6.0	5.8	8.4	---	7.8	10	12	4.0	42	11	4.4
30	9.6	6.6	5.4	8.0	---	5.5	11	54	4.2	23	8.0	4.2
31	10	---	5.4	7.6	---	5.5	---	39	---	16	7.1	---
TOTAL	274.6	218.7	215.3	190.7	242.7	227.4	226.0	455.6	205.4	594.0	1333.6	149.6
MEAN	8.86	7.29	6.95	6.15	8.67	7.34	7.53	14.7	6.85	19.2	43.0	4.99
MAX	14	9.1	8.3	9.0	10	9.0	19	54	18	292	374	6.7
MIN	6.4	6.0	5.4	5.0	7.3	5.5	4.2	6.1	3.5	1.7	6.6	3.5
AC-FT	545	434	427	378	481	451	448	904	407	1180	2650	297

CAL YR 1976 TOTAL 5508.0 MEAN 15.0 MAX 468 MIN 3.1 AC-FT 10930
WTR YR 1977 TOTAL 4333.6 MEAN 11.9 MAX 374 MIN 1.7 AC-FT 8600

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-70, 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

KANSAS RIVER BASIN

06863900 NORTH FORK BIG CREEK NEAR VICTORIA, KS

LOCATION.--Lat 38°53'12", long 99°12'21", in SW¼SW¼SW¼ sec.27, T.13 S., R.17 W., Ellis County, Hydrologic Unit 10260007, at downstream side of highway bridge, 3.5 mi (5.6 km) northwest of Victoria, and about 18 mi (29 km) upstream from mouth.

DRAINAGE AREA.--54 mi² (140 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,940 ft (591 m), from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years, 4.57 ft³/s (0.129 m³/s), 3,310 acre-ft/yr (4.08 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s (748 m³/s) Aug. 9, 1974, gage height, 21.34 ft (6.504 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 373 ft³/s (10.6 m³/s), Aug. 26, gage height, 7.67 ft (2.338 m); no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	3.8	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.36	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.52	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.3	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	184	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	38	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	25	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	7.0	.00
30	.00	.00	.00	.00	---	.00	.00	29	.00	.00	1.1	.00
31	.00	---	.00	.00	---	.00	---	20	---	.00	.01	---
TOTAL	.01	.00	.00	.00	.00	.00	.00	49.00	4.16	.00	268.93	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	1.58	.14	.000	8.68	.000
MAX	.01	.00	.00	.00	.00	.00	.00	29	3.8	.00	184	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.02	.00	.00	.00	.00	.00	.00	97	8.3	.00	533	.00

CAL YR 1976 TOTAL 47.92 MEAN .13 MAX 15 MIN .00 AC-FT 95
WTR YR 1977 TOTAL 322.10 MEAN .88 MAX 184 MIN .00 AC-FT 639

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

06864050 SMOKY HILL RIVER NEAR BUNKER HILL, KS

LOCATION.--Lat 38°47'38", long 98°46'50", in NW¼SW¼NW¼ sec.33, T.14 S., R.13 W., Russell County, Hydrologic Unit 10260006, at downstream side of county highway bridge, 0.5 mi (0.8 km) upstream from Sellens Creek, 6.5 mi (10.5 km) southwest of Bunker Hill, and at mile 261.6 (420.9 km).

DRAINAGE AREA.--7,075 mi² (18,320 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1974, published as "near Russell".

REVISED RECORDS.--WSP 1340: 1941-42(M), 1944-45(M), 1950(P).

GAGE.--Water-stage recorder. Altitude of gage is 1,690 ft (515 m), from topographic map. Prior to Sept. 11, 1940, nonrecording gage and Sept. 11, 1940, to Sept. 30, 1974, water-stage recorder at site 4.7 mi (7.6 km) upstream at datum 1,689.05 ft (514.822 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated since 1950 by Cedar Bluff Reservoir 72.1 mi (116 km) upstream (see sta 06861500).

AVERAGE DISCHARGE.--38 years, 197 ft³/s (5.579 m³/s), 142,700 acre-ft/yr (176 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,500 ft³/s (1,120 m³/s) May 23, 1951, gage height, 23.86 ft (7.273 m), site and datum then in use; no flow at times in 1940, 1943, 1955-57.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1938, reached a stage of about 29.0 ft (8.84 m), from floodmarks, discharge, about 70,000 ft³/s (2,000 m³/s), from rating curve extended above 37,500 ft³/s (1,060 m³/s), site and datum of 1939-74.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,890 ft³/s (138 m³/s) May 30, gage height, 11.74 ft (3.578 m); minimum discharge, 3.8 ft³/s (0.108 m³/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	39	30	20	40	36	33	33	372	20	57	71
2	54	37	30	20	40	38	32	53	220	18	52	52
3	60	36	25	22	45	38	33	88	151	16	44	40
4	76	35	25	22	45	36	40	50	112	14	42	35
5	72	35	25	22	50	37	41	40	85	12	60	31
6	59	35	30	22	50	35	37	37	65	9.6	116	28
7	62	34	30	22	55	34	36	33	54	10	298	25
8	61	34	30	22	60	33	35	38	40	26	302	23
9	55	33	30	20	60	31	33	618	33	92	176	21
10	55	34	35	20	65	37	30	172	26	59	128	19
11	53	34	35	25	70	42	29	81	22	55	123	19
12	45	34	35	25	70	36	27	55	19	23	111	23
13	46	33	35	25	72	35	28	58	37	14	162	23
14	43	32	40	25	67	33	27	74	43	11	120	21
15	37	36	40	22	62	30	26	56	25	9.8	84	20
16	37	35	40	20	55	29	26	50	17	9.9	65	19
17	36	34	40	20	51	28	27	43	14	8.5	53	18
18	34	33	40	20	52	27	33	39	12	8.5	44	18
19	34	32	39	25	49	27	33	40	12	8.2	40	17
20	32	32	34	25	46	27	37	42	53	7.4	36	16
21	31	32	30	30	44	27	44	72	112	6.9	31	15
22	30	32	30	30	43	27	56	63	42	6.7	88	16
23	30	31	35	30	41	27	56	51	27	7.2	594	16
24	30	32	35	30	40	27	51	51	63	9.5	176	16
25	30	32	30	35	39	26	53	42	273	6.8	108	15
26	32	32	30	35	39	26	44	36	85	7.0	115	16
27	47	30	30	35	37	27	39	37	50	11	170	14
28	45	25	30	30	37	39	37	43	34	56	493	13
29	40	25	25	30	---	44	35	127	29	204	223	14
30	45	30	25	35	---	35	33	1950	23	114	184	15
31	43	---	20	35	---	32	---	1430	---	83	108	---
TOTAL	1423	988	988	799	1424	1006	1091	5594	2150	944.0	4403	689
MEAN	45.9	32.9	31.9	25.8	50.9	32.5	36.4	180	71.7	30.5	142	23.0
MAX	76	39	40	35	72	44	56	1950	372	204	594	71
MIN	30	25	20	20	37	26	26	30	12	6.7	31	13
AC-FT	2820	1960	1960	1580	2820	2000	2160	11100	4260	1870	8730	1370

CAL YR 1976 TOTAL 19871.0 MEAN 54.3 MAX 715 MIN 3.0 AC-FT 39410
WTR YR 1977 TOTAL 21499.0 MEAN 58.9 MAX 1950 MIN 6.7 AC-FT 42640

06864500 SMOKY HILL RIVER AT ELLSWORTH, KS

LOCATION.--Lat 38°43'36", long 98°14'00", in SW¼SW¼SE¼ sec.20, T.15 S., R.8 W., Ellsworth County, Hydrologic Unit 10260006, at downstream side of bridge on State Highway 14 in Ellsworth, 2.0 mi (3.2 km) downstream from Turkey Creek, and at mile 213.7 (343.8 km).

DRAINAGE AREA.--7,580 mi² (19,600 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1895 to October 1905, July 1918 to July 1925, August 1928 to current year.

REVISED RECORDS.--WSP 796-B: 1903. WSP 806: Drainage area. WSP 1176: 1923. WSP 1440: 1895-1905, 1919, 1921, 1929-30(M), 1936-37(M).

GAGE.--Water-stage recorder. Datum of gage is 1,509.02 ft (459.949 m) above mean sea level. Prior to Oct. 31, 1905, nonrecording gage at present site at datum 1.61 ft (0.491 m) higher. July 23, 1918, to July 4, 1925, and Aug. 1, 1928, to Nov. 29, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated since 1950 by Cedar Bluff Reservoir 120.0 mi (193 km) upstream (see sta 06861500).

AVERAGE DISCHARGE.--65 years (1895-1905, 1918-24, 1928-77), 257 ft³/s (7.278 m³/s), 186,200 acre-ft/yr (230 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,000 ft³/s (17,300 m³/s) June 1, 1938, gage height, 27.2 ft (8.29 m), from floodmarks; no flow for part of day Sept. 28, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1927 reached a stage of 25.7 ft (7.83 m), from floodmarks, discharge, 44,800 ft³/s (1,270 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharge above regulated base of 3,200 ft³/s (90.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 31	0600	7,260	206	13.96	4.255
Aug. 6	0900	* 7,520	213	14.22	4.334

Minimum daily discharge, 20 ft³/s (0.566 m³/s) Nov. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	57	30	30	40	55	49	48	3500	60	70	205
2	72	55	40	30	50	56	47	67	1000	56	61	157
3	67	53	50	30	60	57	47	62	500	52	71	130
4	63	51	52	30	70	56	53	64	300	49	82	114
5	63	51	53	30	70	55	52	70	200	46	143	102
6	66	51	54	30	80	53	50	56	131	44	3650	92
7	66	50	52	30	80	53	49	49	111	43	611	84
8	61	49	45	30	90	52	47	47	97	42	356	78
9	58	49	45	30	90	51	46	46	86	41	307	73
10	56	49	63	30	100	53	45	586	78	80	211	67
11	55	40	53	30	100	70	44	331	71	78	168	64
12	53	47	61	30	107	62	43	150	67	64	172	64
13	51	44	56	30	111	58	44	103	69	56	135	70
14	50	44	64	30	103	53	44	81	73	47	142	70
15	48	53	64	30	91	50	44	79	71	43	140	60
16	48	51	61	30	85	50	44	77	63	41	113	60
17	46	50	63	30	80	48	47	68	57	39	99	60
18	46	49	78	30	74	47	49	68	53	38	88	60
19	46	48	61	30	71	47	51	57	51	35	81	60
20	46	48	50	30	69	45	54	61	62	34	76	50
21	46	47	42	30	67	44	61	119	132	34	72	50
22	46	47	53	30	65	45	80	81	128	34	108	50
23	46	47	60	30	63	45	69	68	84	36	1260	50
24	46	47	54	30	62	44	63	60	78	34	545	50
25	47	46	54	30	58	45	59	55	490	31	721	50
26	49	46	52	30	57	44	56	53	260	32	414	50
27	58	45	59	30	57	44	56	50	152	32	169	40
28	59	44	66	30	56	79	52	55	96	31	1430	40
29	57	38	61	30	---	76	49	423	76	30	816	40
30	58	20	46	30	---	61	49	2850	66	78	448	50
31	57	---	30	30	---	54	---	6000	---	92	277	---
TOTAL	1708	1416	1672	930	2106	1652	1543	11984	8202	1452	13036	2190
MEAN	55.1	47.2	53.9	30.0	75.2	53.3	51.4	387	273	46.8	421	73.0
MAX	78	57	78	30	111	79	80	6000	3500	92	3650	205
MIN	46	20	30	30	40	44	43	46	51	30	61	40
AC-FT	3390	2810	3320	1840	4180	3280	3060	23770	16270	2880	25860	4340

CAL YR 1976 TOTAL 33913 MEAN 92.7 MAX 3280 MIN 12 AC-FT 67270
WTR YR 1977 TOTAL 47891 MEAN 131 MAX 6000 MIN 20 AC-FT 94990

06865000 KANOPOLIS LAKE NEAR KANOPOLIS, KS

LOCATION.--Lat 38°36'25", long 97°58'02", in SE¼NW¼NE¼ sec.3, T.17 S., R.6 W., Ellsworth County, Hydrologic Unit 10260006, in control tower at dam on Smoky Hill River, 12 mi (19 km) southeast of Kanopolis, 25 mi (40 km) southwest of Salina, and 183.7 mi (295.6 km) upstream from mouth.

DRAINAGE AREA.--7,857 mi² (20,350 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--February 1948 to current year (monthly records only prior to October 1956). Prior to October 1971, published as "Kanopolis Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 17, 1948, and dam was completed in same year. Capacity, 425,700 acre-ft (525 hm³) between elevations 1,415 ft (431.3 m), sill of outlet gate and 1,508 ft (459.6 m). Crest of uncontrolled spillway is at elevation 1,507 ft (459.3 m). Storage capacity of 356,700 acre-ft (440 hm³) above elevation 1,463 ft (445.9 m) is provided for flood control. Storage capacity of 55,200 acre-ft (68.1 hm³) below elevation 1,463 ft (445.9 m) is provided for conservation and recreation. Inflow partly regulated by Cedar Bluff Reservoir (see sta 06861500). Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,506.98 ft (459.328 m) July 14, 1951, contents, 435,100 acre-ft (536 hm³); minimum elevation since conservation pool was first filled, 1,454.44 ft (443.313 m) Feb. 5, 1950; minimum contents, 31,710 acre-ft (39.1 hm³) Dec. 3, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,469.37 ft (447.864 m) June 1, contents, 82,290 acre-ft (101 hm³); minimum, 1,462.10 ft (445.648 m) Oct. 3, 4, contents, 52,190 acre-ft (64.4 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)

1,460	45,410
1,465	62,850
1,470	85,460

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1462.36	1462.65	1463.00	1463.38	1463.57	1464.09	1464.48	1464.74	1469.35	1467.07	1464.02	1467.04
2	1462.35	1462.67	1462.99	1463.38	1463.60	1464.18	1464.39	1464.77	1469.14	1467.00	1464.05	1467.09
3	1462.10	1462.70	1463.00	1463.38	1463.61	1464.18	1464.47	1464.75	1468.82	1466.94	1464.22	1467.08
4	1462.11	1462.67	1463.03	1463.41	1463.65	1464.17	1464.50	1464.79	1468.46	1466.85	1464.36	1467.00
5	1462.13	1462.71	1463.05	1463.41	1463.65	1464.17	1464.50	1464.79	1468.10	1466.65	1464.45	1466.83
6	1462.16	1462.74	1463.05	1463.45	1463.65	1464.17	1464.50	1464.78	1467.75	1466.39	1466.19	1466.64
7	1462.20	1462.74	1463.07	1463.46	1463.65	1464.18	1464.51	1464.76	1467.53	1466.14	1466.62	1466.42
8	1462.23	1462.75	1463.04	1463.47	1463.68	1464.18	1464.52	1464.76	1467.42	1465.88	1466.70	1466.17
9	1462.25	1462.77	1463.06	1463.46	1463.72	1464.18	1464.47	1464.75	1467.40	1465.63	1466.67	1465.99
10	1462.27	1462.79	1463.10	1463.46	1463.76	1464.14	1464.46	1464.77	1467.34	1465.36	1466.54	1465.74
11	1462.28	1462.79	1463.09	1463.44	1463.81	1464.23	1464.45	1465.02	1467.25	1465.12	1466.35	1465.50
12	1462.30	1462.79	1463.10	1463.44	1463.85	1464.23	1464.48	1465.08	1467.20	1464.84	1466.18	1465.30
13	1462.30	1462.76	1463.12	1463.45	1463.93	1464.21	1464.46	1465.07	1467.20	1464.54	1466.08	1465.15
14	1462.34	1462.77	1463.14	1463.47	1463.94	1464.26	1464.44	1465.05	1467.15	1464.25	1465.84	1465.04
15	1462.30	1462.80	1463.16	1463.46	1463.96	1464.24	1464.46	1465.08	1467.08	1464.12	1465.65	1465.01
16	1462.29	1462.84	1463.19	1463.46	1463.99	1464.19	1464.49	1465.10	1467.03	1464.10	1465.49	1464.97
17	1462.26	1462.86	1463.22	1463.48	1464.03	1464.25	1464.54	1465.08	1466.96	1464.05	1465.30	1464.95
18	1462.30	1462.90	1463.26	1463.46	1464.06	1464.18	1464.56	1465.06	1466.92	1464.00	1465.08	1464.97
19	1462.27	1462.90	1463.34	1463.46	1464.06	1464.20	1464.56	1465.12	1466.89	1463.94	1464.90	1464.93
20	1462.28	1462.93	1463.30	1463.47	1464.08	1464.20	1464.66	1465.28	1466.88	1463.92	1464.67	1464.87
21	1462.28	1462.94	1463.29	1463.47	1464.10	1464.16	1464.67	1465.41	1466.89	1463.91	1464.50	1464.89
22	1462.27	1462.91	1463.30	1463.47	1464.13	1464.16	1464.71	1465.41	1467.00	1463.90	1464.44	1464.85
23	1462.33	1462.94	1463.29	1463.49	1464.15	1464.15	1464.73	1465.40	1467.00	1463.89	1465.14	1464.83
24	1462.30	1462.97	1463.31	1463.50	1464.12	1464.10	1464.74	1465.40	1467.03	1463.86	1465.24	1464.80
25	1462.30	1462.99	1463.34	1463.52	1464.12	1464.12	1464.74	1465.37	1467.26	1463.82	1465.23	1464.81
26	1462.43	1463.03	1463.35	1463.52	1464.13	1464.17	1464.73	1465.37	1467.32	1463.96	1465.45	1464.78
27	1462.45	1463.01	1463.37	1463.55	1464.13	1464.17	1464.73	1465.37	1467.35	1463.96	1465.35	1464.74
28	1462.49	1463.01	1463.40	1463.54	1464.12	1464.42	1464.73	1465.40	1467.32	1463.95	1466.24	1464.72
29	1462.54	1463.00	1463.40	1463.54	---	1464.40	1464.70	1465.50	1467.22	1463.94	1466.70	1464.74
30	1462.59	1462.99	1463.40	1463.55	---	1464.44	1464.72	1466.50	1467.17	1463.99	1466.72	1464.78
31	1462.61	---	1463.38	1463.55	---	1464.39	---	1469.01	---	1464.02	1466.64	---
MEAN	1462.31	1462.84	1463.20	1463.47	1463.90	1464.21	1464.57	1465.25	1467.45	1464.94	1465.51	1465.49
MAX	1462.61	1463.03	1463.40	1463.55	1464.15	1464.44	1464.74	1469.01	1469.35	1467.07	1466.72	1467.09
MIN	1462.10	1462.65	1462.99	1463.38	1463.57	1464.09	1464.39	1464.74	1466.88	1463.82	1464.02	1464.72
(+)	53,900	55,210	56,600	57,220	59,360	60,410	61,720	80,520	72,120	58,980	69,790	61,960
(‡)	+510	+1,310	+1,390	+620	+2,140	+1,050	+1,310	+18,800	-8,400	-13,140	+10,810	-7,830

CAL YR 1976 .... (‡) -2,610
WTR YR 1977 .... (‡) +8,570

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

06865500 SMOKY HILL RIVER NEAR LANGLEY, KS

LOCATION.--Lat 38°36'38", long 97°57'04", in SW¼SW¼SE¼ sec.35, T.16 S., R.6 W., Ellsworth County, Hydrologic Unit 10260008, at downstream side of county highway bridge, 0.8 mi (1.3 km) downstream from Kanopolis Dam, 5.0 mi (8.0 km) north of Langley, and at mile 182.9 (294.3 km).

DRAINAGE AREA.--7,857 mi² (20,350 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1310: 1942(M).

GAGE.--Water-stage recorder. Datum of gage is 1,395.66 ft (425.397 m) above mean sea level (Corps of Engineers bench mark). Prior to Apr. 1, 1952, water-stage recorder at datum 2.00 ft (0.610 m) higher. Apr. 1, 1952, to Oct. 1, 1973, water-stage recorder at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good. Flow completely regulated by Kanopolis Lake since 1948 (see sta 06865000).

AVERAGE DISCHARGE.--37 years, 341 ft³/s (9.657 m³/s), 247,100 acre-ft/yr (305 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 21,800 ft³/s (617 m³/s) Oct. 20, 1941, gage height, 32.2 ft (9.81 m), present datum; minimum daily, 0.40 ft³/s (0.011 m³/s) Jan. 23, 1948. Maximum discharge since closure of Kanopolis Dam in 1948, 5,570 ft³/s (158 m³/s) July 15, 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1938 reached a stage of 33.9 ft (10.33 m), present datum, from information by Corps of Engineers, discharge, about 45,000 ft³/s (1,300 m³/s) by extension of subsequent rating curve above 16,000 ft³/s (450 m³/s) and correlation of peak flow at adjacent stations.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,900 ft³/s (53.8 m³/s) Oct. 3, gage height, 10.31 ft (3.142 m); minimum, 3.4 ft³/s (0.096 m³/s) Oct. 5-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	16	17	19	24	43	48	57	1270	184	50	201
2	104	16	17	19	25	44	49	58	1230	180	52	182
3	432	16	17	19	25	45	48	60	1240	176	55	171
4	35	16	16	19	25	44	52	61	1220	172	61	345
5	3.5	16	17	19	26	43	52	60	1180	420	65	513
6	3.5	17	18	19	29	43	52	60	977	603	99	503
7	6.2	18	17	19	30	44	52	61	642	615	157	563
8	15	18	16	21	30	44	53	61	370	623	208	601
9	16	18	15	21	30	45	52	61	193	602	426	584
10	16	18	15	21	31	44	52	60	189	590	550	570
11	15	18	15	21	33	45	52	67	186	608	573	556
12	14	17	16	21	34	45	53	74	182	613	564	546
13	14	16	15	21	36	44	54	75	182	599	555	564
14	14	15	14	21	36	44	55	75	182	583	542	258
15	19	15	15	21	37	44	54	75	178	251	531	66
16	13	16	16	21	38	43	54	76	176	56	521	64
17	14	14	16	21	40	42	56	76	173	55	511	64
18	14	15	17	21	41	42	60	75	171	52	501	63
19	14	16	16	21	41	43	60	76	171	50	490	62
20	14	16	15	21	41	39	63	80	175	49	478	61
21	15	17	14	21	42	41	62	96	175	49	471	60
22	15	16	15	21	42	40	59	93	208	48	470	59
23	15	16	15	21	45	39	59	90	188	46	526	58
24	15	17	16	23	45	38	59	90	180	46	517	59
25	15	17	17	23	44	38	59	89	185	45	514	59
26	16	18	18	23	44	38	58	90	194	49	518	56
27	16	18	19	23	43	39	57	90	197	49	515	56
28	16	18	18	22	44	48	57	90	196	48	570	53
29	16	16	16	22	---	49	57	94	193	47	601	53
30	16	16	16	23	---	50	57	127	188	47	676	53
31	16	---	16	23	---	49	---	666	---	50	627	---
TOTAL	1172.2	496	500	651	1001	1339	1655	2963	12191	7605	12994	7103
MEAN	37.8	16.5	16.1	21.0	35.8	43.2	55.2	95.6	406	245	419	237
MAX	432	18	19	23	45	50	63	666	1270	623	676	601
MIN	3.5	14	14	19	24	38	48	57	171	45	50	53
AC-FT	2330	984	992	1290	1990	2660	3280	5880	24180	15080	25770	14090

CAL YR 1976 TOTAL 38891.2 MEAN 106 MAX 757 MIN 3.5 AC-FT 77140
WTR YR 1977 TOTAL 49670.2 MEAN 136 MAX 1270 MIN 3.5 AC-FT 98520

06866500 SMOKY HILL RIVER NEAR MENTOR, KS

LOCATION.--Lat 38°47'54", long 97°34'28", in SW¼SW¼SW¼ sec.29, T.14 S., R.2 W., Saline County, Hydrologic Unit 10260008, at downstream side of highway bridge, 4.0 mi (6.4 km) north of Mentor, and at mile 101.7 (163.6 km).

DRAINAGE AREA.--8,358 mi² (21,650 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1923 to October 1930, May 1931 to June 1932, October 1947 to current year. Published as "near Salina" 1948-49.

REVISED RECORDS.--WSP 1440: 1924, 1927-28, 1929(M), 1932(M). WSP 1919: 1960.

GAGE.--Water-stage recorder. Datum of gage is 1,211.40 ft (369.235 m) above mean sea level, levels by Corps of Engineers. Prior to June 30, 1932, nonrecording gage at site 10 mi (16 km) upstream at datum 20.9 ft (6.37 m) higher. Oct. 1, 1947, to Sept. 18, 1948, nonrecording gage, and Sept. 19, 1948, to June 26, 1959, water-stage recorder at site 0.3 mi (0.5 km) west on former channel, at present datum. June 27, 1959, to Sept. 8, 1959, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter periods, which are poor. Considerable regulation since 1948 by Kanopolis Lake 82.0 mi (132 km) upstream, see sta 06865000. Diversions above station for irrigation.

AVERAGE DISCHARGE.--36 years (1924-30, 1947-77), 424 ft³/s (12.01 m³/s), 307,200 acre-ft/yr (379 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft³/s (722 m³/s) Aug. 17, 1927, gage height, 26.2 ft (7.986 m), from floodmark, site and datum then in use, from rating curve extended above 5,700 ft³/s (161 m³/s) on basis of flood-routing study and slope-area measurement at gage height 25.8 ft (7.86 m); minimum, 1.8 ft³/s (0.051 m³/s) July 10, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood known at Salina, 7.5 mi (12.1 km) downstream, occurred in 1844; second greatest flood known, May 29, 1903, reached a stage of 26.5 ft (8.08 m) near Mentor, from floodmarks, site and datum of 1923-32.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 2	2000	2,980	84.4	12.14	3.700	Aug. 29	1200	2,760	78.2	11.77	3.587
June 13	1900	1,030	29.2	8.16	2.487	Sept. 2	0500	* 5,860	166	16.24	4.950
June 22	0500	2,250	63.7	10.90	3.322	Sept. 14	1600	2,410	68.3	11.18	3.408
July 2	1600	1,400	39.6	9.08	2.768						

Minimum daily discharge, 30 ft³/s (0.85 m³/s) Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	241	47	35	35	40	63	68	79	480	235	94	3650
2	279	46	40	40	40	62	71	79	1900	726	90	5040
3	214	44	45	40	45	64	68	78	1890	515	86	1460
4	113	43	50	40	45	66	78	76	1170	302	90	602
5	248	41	51	40	45	66	80	76	1100	230	114	451
6	147	43	45	40	50	66	82	74	1060	204	294	523
7	78	43	40	40	50	68	79	74	1020	322	194	599
8	57	42	40	40	60	66	76	74	765	506	141	574
9	52	43	45	40	70	68	73	74	615	532	153	630
10	47	43	45	40	79	64	66	73	385	537	165	622
11	47	44	50	35	86	63	65	74	262	525	301	612
12	47	43	50	35	102	66	66	74	287	513	429	601
13	46	43	50	35	97	65	70	75	536	528	459	856
14	45	42	50	35	84	63	70	80	582	514	459	1980
15	43	44	58	35	69	66	73	83	349	496	470	1110
16	40	44	57	35	65	62	76	87	247	479	467	469
17	39	44	50	35	68	62	79	103	221	276	463	295
18	38	45	49	35	66	62	80	122	212	132	458	245
19	42	45	51	35	68	63	80	103	324	101	446	211
20	40	45	45	35	66	58	93	90	618	85	444	194
21	40	44	35	35	68	62	107	216	976	77	438	182
22	40	43	35	40	65	59	108	798	1930	72	432	171
23	42	44	40	40	66	58	115	394	1110	106	469	165
24	44	44	40	40	65	57	100	186	572	92	616	156
25	42	45	45	40	62	57	93	131	597	81	529	152
26	43	40	45	45	63	57	83	112	672	78	485	144
27	52	35	47	45	64	58	79	106	359	79	469	139
28	57	35	55	35	65	73	78	105	288	85	835	137
29	56	35	56	35	---	80	76	168	259	92	2310	169
30	54	35	48	35	---	83	78	331	246	84	1080	161
31	49	---	30	35	---	75	---	543	---	92	843	---
TOTAL	2422	1274	1422	1170	1813	2002	2410	4738	21032	8696	14323	22300
MEAN	78.1	42.5	45.9	37.7	64.8	64.6	80.3	153	701	281	462	743
MAX	279	47	58	45	102	83	115	798	1930	726	2310	5040
MIN	38	35	30	35	40	57	65	73	212	72	86	137
AC-FT	4800	2530	2820	2320	3600	3970	4780	9400	41720	17250	28410	44230

CAL YR 1976 TOTAL 60081 MEAN 164 MAX 2600 MIN 29 AC-FT 119200
WTR YR 1977 TOTAL 83602 MEAN 229 MAX 5040 MIN 30 AC-FT 165800

06866500 SMOKY HILL RIVER NEAR MENTOR, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

COOPERATION.--Chemical data were furnished by Kansas Department of Health and Environment, samples were collected and analyses reviewed by U.S. Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)
OCT 08...	57	1210	7.5	14.0	35	350	180	110	20	110	2.5	10
DEC 01...	36	1150	7.9	.5	5	440	110	130	30	81	1.7	8.3
JAN 05...	38	1250	7.7	.5	3	490	120	150	29	92	1.8	8.6
FEB 01...	3.9	1180	7.9	.5	3	390	170	120	25	92	2.0	8.7
MAR 02...	61	1150	7.6	5.5	3	360	270	110	22	110	2.5	8.6
MAY 24...	183	--	7.5	22.5	--	--	--	--	--	34	--	12
JUL 05...	229	880	--	25.0	--	180	120	50	13	80	2.6	11
AUG 15...	473	--	7.3	26.5	--	--	--	--	--	92	--	10
SEP 02...	4890	--	9.0	22.5	--	--	--	--	--	10	--	6.0

DATE	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
OCT 08...	210	0	170	170	180	.3	8.0	710	.97	109	.32	.04
DEC 01...	320	0	260	170	120	--	12	711	.97	69.1	.43	.03
JAN 05...	370	0	300	180	140	--	13	800	1.09	82.1	.84	.03
FEB 01...	270	0	220	160	140	.2	8.0	680	.92	7.16	.38	.02
MAR 02...	230	0	189	180	160	.4	4.4	700	.95	115	.02	.05
MAY 24...	--	--	--	82	--	.4	11	--	--	--	1.8	--
JUL 05...	76	0	62	120	130	.3	9.0	451	.63	--	.00	.37
AUG 15...	--	--	--	130	150	.5	--	--	--	--	.30	.35
SEP 02...	--	--	--	22	24	.4	--	--	--	--	.10	.17

06867000 SALINE RIVER NEAR RUSSELL, KS

LOCATION.--Lat 38°58'00", long 98°51'20", in SW¼SW¼NW¼ sec.35, T.12 S., R.14 W., Russell County, Hydrologic Unit 10260009, at downstream side of bridge on U.S. Highway 281, 2.0 mi (3.2 km) downstream from Salt Creek, 5.0 mi (8.0 km) north of Russell, and at mile 190.6 (306.7 km).

DRAINAGE AREA.--1,502 mi^2 (3,890 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to September 1953, June 1959 to current year.

REVISED RECORD.--WSP 1919: 1960.

GAGE.--Water-stage recorder. Datum of gage is 1,551.59 ft (472.925 m) above mean sea level. Prior to Jan. 22, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are poor. Low flow partially regulated at times by irrigation.

AVERAGE DISCHARGE.--26 years (water years 1946-53, 1960-77), 112 ft^3/s (3.172 m^3/s), 81,140 acre-ft/yr (100 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,400 ft^3/s (549 m^3/s) Sept. 1, 1964, gage height, 19.70 ft (6.005 m); no flow Aug. 11, 12, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,500 ft^3/s (382 m^3/s) Aug. 26, gage height, 18.14 ft (5.529 m), no other peak above base of 2,000 ft^3/s (56.6 m^3/s); minimum, 0.60 ft^3/s (0.017 m^3/s) July 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	12	6.4	4.4	6.0	17	12	30	99	5.3	10	31
2	20	12	6.2	4.3	6.6	17	12	30	57	5.1	9.0	24
3	18	12	6.0	4.2	7.0	17	12	30	46	4.3	7.8	20
4	22	11	6.0	4.0	7.6	16	14	29	41	3.7	7.0	18
5	23	11	6.0	3.8	8.2	16	14	26	37	3.0	11	16
6	17	11	6.0	3.7	8.6	16	13	24	33	2.7	47	15
7	18	11	6.2	3.7	9.6	16	12	23	30	3.2	31	14
8	16	11	6.4	3.6	11	16	12	22	26	2.9	14	13
9	16	11	6.6	3.6	12	15	11	234	23	2.6	9.9	12
10	15	11	7.0	3.6	13	15	11	64	20	5.5	7.6	12
11	14	10	7.4	3.6	14	16	11	39	18	3.8	10	11
12	13	9.8	7.6	3.5	16	15	11	30	16	3.0	12	11
13	13	9.5	8.0	3.5	17	16	11	32	19	2.3	9.6	11
14	12	9.0	8.4	3.5	19	15	11	29	20	2.0	7.5	10
15	11	10	8.6	3.5	22	14	11	26	20	1.6	6.6	10
16	10	11	8.8	3.6	24	14	12	22	16	1.4	6.7	10
17	10	11	9.0	3.6	28	14	14	20	14	1.6	10	10
18	11	12	9.2	3.6	27	13	13	17	13	1.6	8.9	9.5
19	10	12	9.2	3.7	24	12	12	15	12	1.4	8.2	8.8
20	10	11	9.0	3.8	23	12	17	16	13	1.4	7.5	8.8
21	9.7	11	8.6	3.9	22	12	20	29	15	1.4	6.9	8.7
22	9.6	13	7.8	4.1	22	12	42	36	12	2.2	7.7	8.1
23	11	11	7.6	4.2	20	13	55	42	11	2.4	7.6	8.1
24	9.7	10	7.0	4.4	21	12	56	34	10	1.7	7.6	8.2
25	9.6	10	6.5	4.6	20	12	58	29	9.8	1.2	70	7.7
26	10	10	6.2	4.7	19	12	52	25	9.7	.78	4980	7.7
27	15	8.8	5.8	4.8	19	12	45	23	8.8	.67	360	7.7
28	13	7.6	5.6	5.0	18	17	39	21	7.8	7.9	183	9.0
29	13	7.2	5.2	5.2	---	17	34	24	7.0	33	116	9.6
30	13	6.8	4.8	5.5	---	14	31	130	6.1	25	63	8.4
31	13	---	4.6	5.8	---	13	---	214	---	15	42	---
TOTAL	429.6	313.7	217.7	127.0	464.6	448	678	1365	670.2	149.65	6085.1	358.3
MEAN	13.9	10.5	7.02	4.10	16.6	14.5	22.6	44.0	22.3	4.83	196	11.9
MAX	24	13	9.2	5.8	28	17	58	234	99	33	4980	31
MIN	9.6	6.8	4.6	3.5	6.0	12	11	15	6.1	.67	6.6	7.7
AC-FT	853	622	432	252	922	889	1340	2710	1330	297	12070	711

CAL YR 1976	TOTAL	8959.39	MEAN	24.5	MAX	199	MIN	.16	AC-FT	17770
WTR YR 1977	TOTAL	11307.05	MEAN	31.0	MAX	4980	MIN	.67	AC-FT	22430

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-51, 1962 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1946 to September 1949, October 1964 to July 1970.
WATER TEMPERATURES: January 1946 to September 1951, October 1964 to July 1970.
SUSPENDED-SEDIMENT DISCHARGE: May 1946 to September 1951.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR					
22...	1410	58	2500	304	48
AUG					
26...	1720	1970	370	1530	8140

06868100 WILSON LAKE NEAR WILSON, KS

LOCATION.--Lat 38°58'00", long 98°29'35", in NE¼NW¼SE¼ sec.36, T.12 S., R.11 W., Russell County, Hydrologic Unit 10260009, in the control tower near right end of Wilson Dam on the Saline River, 10 mi (16 km) north of Wilson, and at mile 153.9 (247.6 km).

DRAINAGE AREA.--1,917 mi² (4,965 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--December 1964 to current year. Prior to October 1971, published as "Wilson Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam; storage began Dec. 29, 1964. Total capacity, 1,711,000 acre-ft (2,110 hm³) below elevation 1,587.5 ft (483.87 m), consisting of 1,960 acre-ft (2.42 hm³) of dead storage below elevation 1,450 ft (442.0 m); conservation pool, 245,880 acre-ft (303 hm³) between elevation 1,450 ft (442.0 m) and 1,516 ft (462.1 m); flood control pool, 1,253,000 acre-ft (1,540 hm³) between 1,516 ft (462.1 m) and 1,582 ft (482.2 m), crest of spillway; and surcharge capacity of 210,200 acre-ft (259 hm³) between 1,582 ft (482.2 m) and 1,587.5 ft (483.87 m). Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,521.92 ft (463.881 m) Nov. 7, 1973, contents, 305,600 acre-ft (377 hm³); minimum since conservation pool first filled, 1,493.59 ft (455.246 m) Dec. 26, 1966, contents, 91,500 acre-ft (113 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,515.90 ft (462.046 m) Aug. 31, contents, 246,900 acre-ft (304 hm³); minimum, 1,513.53 ft (461.324 m) Aug. 22, contents, 226,100 acre-ft (279 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)

1,512	213,300	1,516	247,800
1,514	230,200	1,518	266,400

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1513.94	1513.98	1513.83	1513.73	1513.77	1513.85	1513.98	1514.06	1514.63	1514.28	1513.56	1515.85
2	1513.96	1513.97	1513.81	1513.75	1513.79	1513.92	1513.91	1514.08	1514.62	1514.29	1513.55	1515.84
3	1514.11	1513.96	1513.80	1513.74	1513.80	1513.92	1514.01	1514.09	1514.63	1514.24	1513.57	1515.83
4	1514.17	1513.94	1513.80	1513.77	1513.80	1513.89	1513.99	1514.10	1514.63	1514.20	1513.56	1515.83
5	1514.16	1513.94	1513.81	1513.77	1513.80	1513.88	1513.98	1514.07	1514.64	1514.17	1513.66	1515.83
6	1514.16	1513.93	1513.79	1513.77	1513.80	1513.87	1513.97	1514.06	1514.62	1514.14	1513.75	1515.82
7	1514.17	1513.93	1513.79	1513.77	1513.82	1513.87	1513.96	1514.06	1514.60	1514.13	1513.76	1515.80
8	1514.15	1513.92	1513.78	1513.78	1513.82	1513.87	1513.97	1514.06	1514.56	1514.10	1513.73	1515.79
9	1514.14	1513.92	1513.76	1513.78	1513.83	1513.87	1513.98	1514.14	1514.56	1514.07	1513.71	1515.75
10	1514.14	1513.92	1513.77	1513.78	1513.83	1513.90	1513.97	1514.19	1514.55	1514.03	1513.67	1515.72
11	1514.11	1513.90	1513.77	1513.78	1513.84	1513.98	1513.92	1514.20	1514.52	1514.02	1513.70	1515.71
12	1514.13	1513.89	1513.77	1513.78	1513.85	1513.97	1513.94	1514.20	1514.49	1514.00	1513.70	1515.74
13	1514.12	1513.88	1513.77	1513.75	1513.87	1513.97	1513.94	1514.20	1514.55	1513.97	1513.67	1515.72
14	1514.09	1513.88	1513.77	1513.73	1513.87	1513.95	1513.93	1514.20	1514.53	1513.92	1513.66	1515.70
15	1514.07	1513.88	1513.77	1513.73	1513.87	1513.93	1513.93	1514.18	1514.51	1513.91	1513.65	1515.68
16	1514.04	1513.88	1513.78	1513.73	1513.87	1513.92	1513.93	1514.17	1514.48	1513.87	1513.64	1515.70
17	1514.00	1513.88	1513.79	1513.74	1513.87	1513.94	1513.94	1514.17	1514.49	1513.85	1513.61	1515.68
18	1514.00	1513.87	1513.79	1513.73	1513.88	1513.90	1513.95	1514.16	1514.47	1513.80	1513.58	1515.67
19	1513.98	1513.87	1513.78	1513.73	1513.88	1513.91	1513.96	1514.15	1514.47	1513.73	1513.58	1515.60
20	1513.95	1513.88	1513.77	1513.74	1513.88	1513.91	1513.99	1514.25	1514.49	1513.70	1513.56	1515.56
21	1513.93	1513.86	1513.77	1513.73	1513.89	1513.89	1514.01	1514.37	1514.47	1513.66	1513.55	1515.56
22	1513.92	1513.85	1513.77	1513.76	1513.91	1513.87	1514.03	1514.25	1514.48	1513.68	1513.70	1515.52
23	1513.92	1513.87	1513.77	1513.77	1513.92	1513.87	1514.04	1514.25	1514.46	1513.66	1513.68	1515.55
24	1513.91	1513.85	1513.77	1513.77	1513.89	1513.87	1514.05	1514.24	1514.46	1513.65	1513.65	1515.51
25	1513.89	1513.84	1513.80	1513.77	1513.88	1513.86	1514.06	1514.24	1514.45	1513.64	1513.78	1515.49
26	1513.94	1513.85	1513.79	1513.77	1513.89	1513.87	1514.06	1514.25	1514.44	1513.62	1515.28	1515.46
27	1513.96	1513.85	1513.77	1513.82	1513.89	1513.88	1514.06	1514.23	1514.42	1513.60	1515.63	1515.44
28	1513.96	1513.83	1513.77	1513.78	1513.87	1514.06	1514.06	1514.26	1514.40	1513.61	1515.78	1515.48
29	1513.96	1513.83	1513.76	1513.78	---	1514.00	1514.05	1514.32	1514.41	1513.60	1515.81	1515.48
30	1513.97	1513.82	1513.75	1513.77	---	1513.96	1514.06	1514.58	1514.39	1513.59	1515.84	1515.46
31	1513.97	---	1513.74	1513.77	---	1513.95	---	1514.58	---	1513.58	1515.84	---
MEAN	1514.03	1513.89	1513.78	1513.76	1513.85	1513.91	1513.99	1514.20	1514.51	1513.88	1514.05	1515.66
MAX	1514.17	1513.98	1513.83	1513.82	1513.92	1514.06	1514.06	1514.58	1514.64	1514.29	1515.84	1515.85
MIN	1513.89	1513.82	1513.74	1513.73	1513.77	1513.85	1513.91	1514.06	1514.39	1513.58	1513.55	1515.44
(†)	229,900	228,600	227,900	228,200	229,000	229,700	230,700	235,200	233,500	226,600	246,400	243,000
(‡)	+300	-1,300	-700	+300	+800	+700	+1,000	+4,500	-1,700	-6,900	+19,800	-3,400

CAL YR 1976 .... (‡) -7,700
WTR YR 1977 .... (‡) +13,400

† CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

06868200 SALINE RIVER AT WILSON DAM, KS

LOCATION.--Lat 38°58'35", long 98°29'20", in NE¼SW¼SE¼ sec.25, T.12 S., R.11 W., Russell County, Hydrologic Unit 10260010, 0.5 mi (0.8 km) downstream from outlet of Wilson Dam, 9.0 mi (14.5 km) upstream from Wolf Creek, 10.0 mi (16 km) north of Wilson, and at mile 153.4 (246.8 km).

DRAINAGE AREA.--1,917 mi² (4,965 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,437 ft (438.0 m), from topographic map. Prior to May 12, 1965, water-stage recorder at site 1.5 mi (2.4 km) downstream at different datum.

REMARKS.--Records good. Flow completely regulated by Wilson Lake (see sta 06868100).

AVERAGE DISCHARGE.--14 years, 50.5 ft³/s (1.430 m³/s), 36,590 acre-ft/yr (45.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,320 ft³/s (94.0 m³/s) Apr. 6, 1973, gage height, 18.84 ft (5.74 m); minimum, 0.30 ft³/s (0.008 m³/s) Mar. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 145 ft³/s (4.11 m³/s) Sept. 7, gage height, 5.48 ft (1.670 m); minimum 2.3 ft³/s (0.065 m³/s) March 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	6.2	7.1	4.8	5.3	4.4	9.6	10	5.3	19	19	20
2	9.1	6.2	7.1	4.7	5.3	4.6	11	10	6.0	19	19	20
3	13	6.4	7.1	4.4	5.3	5.1	10	10	6.5	19	18	20
4	12	6.6	7.1	4.4	5.5	7.6	11	8.8	6.9	19	18	20
5	10	6.6	7.1	4.4	5.3	12	11	7.6	7.1	19	19	20
6	9.6	6.6	7.6	4.3	5.3	11	11	7.1	7.1	19	20	20
7	10	6.6	7.7	3.9	5.3	11	11	7.3	13	19	19	27
8	9.6	6.8	7.1	4.0	5.3	10	11	7.1	22	19	19	18
9	9.5	6.6	7.4	4.2	5.3	9.6	11	7.8	21	19	19	18
10	9.6	6.6	7.6	4.3	4.9	10	11	7.9	20	19	19	18
11	9.8	6.6	7.6	4.1	4.8	10	11	8.6	21	19	19	19
12	9.9	6.6	7.6	4.1	5.0	10	11	8.9	21	19	19	19
13	9.6	6.8	9.9	4.1	4.9	9.6	11	9.2	21	19	19	19
14	9.9	7.1	5.3	4.1	4.9	9.6	10	9.1	20	19	19	19
15	10	7.1	5.3	3.9	4.8	9.6	10	9.1	20	19	19	19
16	10	7.1	5.3	4.0	4.6	9.6	9.6	9.1	20	19	19	19
17	10	7.1	5.3	4.2	5.1	10	9.6	9.1	20	19	19	20
18	10	7.1	5.3	5.0	5.1	9.6	9.6	8.8	19	19	20	20
19	16	7.1	5.6	5.9	5.0	10	17	8.6	19	19	19	19
20	9.1	7.1	4.9	5.5	5.0	9.6	10	9.0	20	19	19	19
21	9.1	7.4	4.8	5.3	4.4	10	10	9.2	19	19	20	19
22	9.1	7.6	4.8	5.0	4.5	9.6	10	8.6	23	19	25	19
23	9.1	7.1	4.8	5.1	5.1	10	10	8.6	20	19	20	19
24	9.1	6.6	4.8	5.3	4.9	10	10	8.0	20	19	19	19
25	9.1	6.6	4.8	5.5	4.7	10	10	7.3	20	19	20	20
26	9.5	7.2	4.8	13	4.8	9.6	10	6.6	20	19	21	20
27	10	7.6	4.9	5.3	4.4	10	10	6.6	20	19	20	20
28	9.6	7.4	4.9	5.2	4.5	12	10	7.1	20	19	21	20
29	6.7	7.1	4.8	5.3	---	10	10	8.2	20	19	20	20
30	5.5	7.1	5.0	5.4	---	10	10	12	19	19	20	21
31	6.2	---	4.8	5.3	---	10	---	6.7	---	19	20	---
TOTAL	298.8	206.2	188.2	154.0	139.3	294.1	316.4	261.6	516.9	589	606	590
MEAN	9.64	6.87	6.07	4.97	4.98	9.49	10.5	8.44	17.2	19.0	19.5	19.7
MAX	16	7.6	9.9	13	5.5	12	17	12	23	19	25	27
MIN	5.5	6.2	4.8	3.9	4.4	4.4	9.6	6.6	5.3	19	18	18
AC-FT	593	409	373	305	276	583	628	519	1030	1170	1200	1170

CAL YR 1976 TOTAL 6498.2 MEAN 17.8 MAX 483 MIN 4.8 AC-FT 12890
WTR YR 1977 TOTAL 4160.5 MEAN 11.4 MAX 27 MIN 3.9 AC-FT 8250

06869500 SALINE RIVER AT TESCOTT, KS

LOCATION.--Lat 39°00'15", long 97°52'26", in NE¼SE¼SE¼ sec.16, T.12 S., R.5 W., Ottawa County, Hydrologic Unit 10260010, at downstream side of highway bridge, 0.5 mi (0.8 km) south of Tescott, 0.5 mi (0.8 km) upstream from Dry Creek, and at mile 68.5 (110.2 km).

DRAINAGE AREA.--2,820 mi² (7,300 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1919 to current year.

REVISED RECORDS.--WSP 806: Drainage area. WSP 856: 1931. WSP 1310: 1926-28(M), 1935(M), 1945(M), 1947-48(M). WSP 1919: 1922, 1960.

GAGE.--Water-stage recorder. Datum of gage is 1,265.34 ft (385.676 m) above mean sea level. Prior to Nov. 23, 1934, nonrecording gage at present site and datum.

REMARKS.--Records good except those for periods of ice effect, which are poor. Some diurnal fluctuation caused by power plants above station. Diversions above station for irrigation. Flow moderately regulated since 1964 by Wilson Lake (see sta 06868100).

AVERAGE DISCHARGE.--58 years, 221 ft³/s (6.259 m³/s), 160,100 acre-ft/yr (197 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,400 ft³/s (1,740 m³/s) July 13, 1951, gage height, 30.06 ft (9.162 m), from rating curve extended above 7,000 ft³/s (200 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1935-36.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 13, 1951 was greatest known since at least 1903 and exceeded the flood of May-June 1903 by about 1.0 ft (0.3 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 1	0300	2,280	64.6	21.90	6.675
Aug. 26	1500	* 3,090	87.5	24.63	7.507
Aug. 29	2100	2,620	74.2	23.07	7.032

Minimum discharge, 7.8 ft³/s (0.22 m³/s) Dec. 29, 30, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	26	19	15	16	23	47	28	2060	31	21	236
2	24	25	19	16	17	23	38	28	892	30	24	210
3	24	25	20	16	18	23	34	29	217	30	22	126
4	456	22	22	18	20	23	34	28	114	30	21	88
5	1240	21	22	19	22	23	33	28	70	29	22	73
6	1470	20	23	20	25	24	34	27	54	28	170	65
7	604	20	20	20	26	23	34	27	45	27	1100	60
8	171	20	21	18	26	23	32	26	40	27	387	56
9	78	20	24	16	26	24	30	25	37	25	116	54
10	50	20	22	15	27	28	29	23	33	26	61	52
11	37	20	18	15	27	29	28	23	32	26	40	53
12	32	21	23	17	27	33	27	24	38	24	31	50
13	28	20	23	20	27	47	27	26	42	23	31	50
14	26	21	23	18	28	37	27	29	43	21	31	50
15	24	21	21	16	28	32	27	30	48	21	29	50
16	22	20	21	15	29	30	27	27	52	20	27	48
17	21	20	24	15	36	28	29	25	53	18	26	46
18	21	23	23	17	31	27	31	23	44	18	25	46
19	20	23	21	20	28	26	33	23	43	19	25	44
20	21	22	21	20	29	26	34	23	45	19	25	43
21	22	21	20	20	28	25	34	54	44	19	25	43
22	22	21	21	20	27	25	35	56	129	20	25	41
23	24	21	19	20	27	25	39	54	164	18	414	42
24	28	21	18	20	28	25	40	42	53	23	2050	42
25	25	21	19	20	27	25	35	31	95	19	2510	42
26	24	21	18	20	26	25	33	25	311	18	2940	41
27	26	22	20	20	25	26	30	24	107	18	1590	41
28	25	22	20	18	24	29	29	23	51	17	894	40
29	27	20	18	15	---	37	28	132	40	17	2370	43
30	28	20	16	15	---	64	28	840	34	24	2150	191
31	28	---	15	15	---	58	---	1900	---	24	826	---
TOTAL	4673	640	634	549	725	916	966	3703	5030	709	18028	2066
MEAN	151	21.3	20.5	17.7	25.9	29.5	32.2	119	168	22.9	582	68.9
MAX	1470	26	24	20	36	64	47	1900	2060	31	2940	236
MIN	20	20	15	15	16	23	27	23	32	17	21	40
AC-FT	9270	1270	1260	1090	1440	1820	1920	7340	9980	1410	35760	4100

CAL YR 1976 TOTAL 33664 MEAN 92.0 MAX 3990 MIN 15 AC-FT 66770
WTR YR 1977 TOTAL 38639 MEAN 106 MAX 2940 MIN 15 AC-FT 76640

KANSAS RIVER BASIN

06869500 SALINE RIVER AT TESCOTT, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-53, 1960 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1949 to September 1953, August 1959 to September 1966, October 1968 to September 1975.
WATER TEMPERATURES: December 1949 to September 1953, August 1959 to September 1975.
SUSPENDED-SEDIMENT DISCHARGE: August 1959 to June 1970.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT					
05...	1020	1210	670	4800	15700
20...	1200	21	1700	149	8.4
APR					
26...	1335	33	2400	157	14
MAY					
31...	1710	1870	440	1540	7780

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM
OCT							
05...	1020	1210	4800	49	82	96	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
APR												
26...	1335	14	157	23	24	29	34	72	85	96	99	100

06870200 SMOKY HILL RIVER AT NEW CAMBRIA, KS

LOCATION.--Lat 38°51'49", long 97°28'58", in NE¼NE¼SE¼ sec.1, T.14 S., R.2 W., Saline County, Hydrologic Unit 10260008, at downstream side of county highway bridge, 1.0 mi (1.6 km) southeast of New Cambria, 10.1 mi (16.3 km) upstream from Gypsum Creek, about 18.1 mi (29.1 km) upstream from Solomon River, and at mile 86.6 (139.4 km). Prior to July 6, 1977, at site 2.7 mi (4.3 km) downstream.

DRAINAGE AREA.--11,730 mi² (30,380 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,165 ft (355 m), from topographic map. Prior to Mar. 27, 1963, nonrecording gage and Mar. 27, 1963, to July 5, 1977, water-stage recorder at site 2.7 mi (4.3 km) downstream at different datum.

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated by Kanopolis Lake 97.7 mi (157 km) upstream (see sta 06865000) and slightly regulated by Wilson Lake (see sta 06868100).

AVERAGE DISCHARGE.--15 years, 641 ft³/s (18.15 m³/s), 464,400 acre-ft/yr (573 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s (748 m³/s) Oct. 12, 1973, gage height, 30.91 ft (9.421 m); minimum, 18 ft³/s (0.51 m³/s) July 16, 17, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharge above regulated base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 3	0500	4,670	132	19.93	6.075
Aug. 29	2000	5,290	150	22.23	6.776
Sept. 2	1600	* 8,040	228	26.39	8.044

Minimum daily discharge, 50 ft³/s (1.42 m³/s) Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	97	70	70	90	104	116	109	3550	307	209	5330
2	315	92	80	70	90	103	131	106	3700	507	231	7590
3	314	91	80	70	90	109	131	123	4260	857	132	4720
4	187	88	80	70	90	106	160	121	2430	427	116	1580
5	187	85	90	70	90	105	156	108	1480	298	132	925
6	560	84	90	70	90	104	130	105	1250	258	769	770
7	1110	83	70	70	100	102	122	102	1140	264	2170	852
8	1340	83	60	70	100	100	114	163	978	496	1170	801
9	806	80	70	60	100	92	108	105	694	496	1110	798
10	318	80	90	60	110	93	99	95	551	513	668	814
11	188	79	70	60	130	108	95	92	344	508	447	791
12	138	79	80	60	140	105	91	90	318	498	520	789
13	115	78	80	60	147	105	97	87	463	498	536	896
14	102	78	90	60	154	105	95	86	1410	498	513	1740
15	92	80	90	60	129	105	95	89	773	477	505	1730
16	88	90	88	60	114	115	100	91	418	534	523	807
17	82	91	99	60	122	108	127	124	322	411	520	489
18	81	92	98	60	126	101	126	132	288	179	492	394
19	79	91	99	60	122	97	113	144	308	125	479	346
20	81	90	81	60	116	95	126	123	581	104	470	322
21	77	89	60	70	120	92	192	313	762	94	461	304
22	77	87	60	70	117	92	206	1240	1930	82	461	282
23	80	89	70	70	113	89	188	990	1530	85	531	274
24	79	90	80	70	114	87	163	436	1000	146	1340	270
25	80	90	90	80	109	86	143	273	1020	100	1230	248
26	82	90	90	80	107	87	129	201	1350	89	2230	238
27	115	90	90	80	107	87	120	178	710	83	2650	230
28	123	70	90	70	106	115	111	162	658	86	3410	220
29	110	60	84	70	---	176	107	198	468	91	4850	366
30	113	60	60	80	---	124	109	1570	355	88	4230	426
31	105	---	50	80	---	125	---	3550	---	102	3190	---
TOTAL	7424	2526	2479	2100	3143	3222	3800	11306	35041	9301	36295	35344
MEAN	239	84.2	80.0	67.7	112	104	127	365	1168	300	1171	1178
MAX	1340	97	99	80	154	176	206	3550	4260	857	4850	7590
MIN	77	60	50	60	90	86	91	86	288	82	116	220
AC-FT	14730	5010	4920	4170	6230	6390	7540	22430	69500	18450	71990	70100

CAL YR 1976 TOTAL 105045 MEAN 287 MAX 3410 MIN 50 AC-FT 208400
WTR YR 1977 TOTAL 151901 MEAN 416 MAX 7590 MIN 50 AC-FT 301500

06870200 SMOKY HILL RIVER AT NEW CAMBRIA, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-70, 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1973 to current year.
CHLORIDE: October 1976 to current year.
WATER TEMPERATURES: October 1962 to September 1968, October 1973 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1962 to September 1968.

COOPERATION.--Chemical data were furnished by Kansas Department of Health and Environment, samples were collected and analyses reviewed by U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,320 micromhos July 28, 1975; minimum, 233 micromhos Aug. 7, 1977.
CHLORIDE: Maximum, 390 mg/l Oct. 6, 1976; minimum, 13 mg/l Aug. 7, 1977.
WATER TEMPERATURES: Maximum, 34.0°C July 22, 23, 1968; minimum, 0.0°C on several days during winter periods.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--Specific conductance of 2,570 micromhos June 10, 1963 and 138 micromhos Nov. 8, 1975, and chloride of 409 mg/l Dec. 3, 1963 were observed.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,970 micromhos Jan. 9-20; minimum daily, 233 micromhos Aug. 7.
CHLORIDE: Maximum daily, 390 mg/l Oct. 6; minimum daily, 13 mg/l Aug. 7.
WATER TEMPERATURES: Maximum daily, 32.0°C July 24; minimum daily, 0.0°C on several days during winter periods.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA+MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
OCT 07...	1140	690	6.6	13.5	4800	200	48	64	8.8	63	2.0	8.6
DEC 01...	70	1730	7.6	.5	1	450	130	130	30	190	3.9	10
JAN 05...	71	1760	7.5	.5	6	460	130	130	34	200	4.0	9.3
FEB 18...	1280	1440	7.6	4.0	7	370	150	110	24	170	3.8	8.0
MAR 03...	112	1350	7.5	4.0	11	350	160	100	24	160	3.7	8.5
APR 12...	89	1390	8.4	17.5	--	260	140	66	24	180	4.8	13
MAY 24...	382	1300	7.5	24.0	--	--	--	--	--	44	--	11
JUL 05...	288	730	--	27.5	--	110	69	30	8.3	65	2.7	10
SEP 02...	8040	--	8.3	24.0	--	--	--	--	--	11	--	6.0

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT 07...	180	0	150	72	83	.3	9.1	400	.54	1230	.14	.06
DEC 01...	320	0	260	220	260	--	14	1040	1.41	197	3.4	.95
JAN 05...	330	0	270	230	260	--	10	1050	1.43	201	2.9	.98
FEB 18...	270	0	221	200	230	.4	5.4	888	1.21	3070	1.9	.52
MAR 03...	240	0	197	190	220	.3	5.9	832	1.13	252	2.1	.68
APR 12...	150	0	123	200	240	.6	2.8	808	1.09	193	1.7	.80
MAY 24...	--	--	--	78	190	.1	11	--	--	--	1.5	--
JUL 05...	61	0	50	91	100	.3	10	345	.46	--	.00	.55
SEP 02...	--	--	--	25	22	.4	--	--	--	--	.40	.14

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
AUG 31...	1105	3100	1940	16200

06870200 SMOKY HILL RIVER AT NEW CAMBRIA, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1310	1400	1760	1800	1490	1450	1370	1530	357	916	1220	330
2	1280	1440	1770	1800	1490	1430	1590	1490	352	693	700	293
3	1310	1490	1670	1800	1490	1410	1470	1420	360	566	827	342
4	1350	1600	1720	1800	1490	1450	1340	1440	464	960	1000	513
5	1450	1670	1710	1800	1490	1450	1220	1300	1000	875	856	610
6	1040	1670	1660	1800	1490	1460	1520	1470	1060	976	408	619
7	320	1660	1640	1800	1400	1470	1330	1500	1100	1030	233	625
8	354	1660	1720	1800	1540	1480	1270	1260	1100	1080	779	680
9	479	1670	1660	1970	1490	1480	1520	1530	910	1080	513	640
10	608	1660	1620	1970	1440	1490	1280	1040	719	1080	679	637
11	1040	1700	1780	1970	1390	1500	1540	1580	839	1110	850	641
12	1010	1660	1650	1970	1300	1500	1520	1610	859	1120	1010	643
13	1010	1670	1680	1970	1250	1420	1510	1610	959	1120	1000	650
14	951	1670	1690	1970	1320	1470	1530	1610	499	1150	980	495
15	976	1660	1680	1970	1390	1710	1560	1600	512	1150	968	493
16	992	1560	1590	1970	1360	1600	1560	1440	749	1140	950	638
17	1140	1550	1650	1970	1390	1690	1380	1620	889	1220	976	743
18	1040	1560	1640	1970	1500	1620	1310	1520	1410	1310	860	799
19	1210	1560	1650	1970	1520	1680	898	·1460	1130	1390	755	836
20	1280	1550	1720	1970	1470	1720	1060	1100	850	1400	759	860
21	1140	1580	1720	1800	1480	1580	1230	1420	685	1520	760	851
22	1230	1600	1720	1800	1480	1620	1390	532	486	1480	760	893
23	1260	1620	1660	1800	1460	1600	1100	589	475	1510	727	900
24	1320	1620	1670	1800	1460	1490	1290	561	498	1480	533	905
25	1300	1640	1570	1600	1470	1480	1230	818	692	1070	500	937
26	1330	1660	1590	1600	1470	1600	·1370	965	443	1250	477	944
27	1190	1680	1570	1600	1460	1460	1460	986	538	1400	430	959
28	1290	1700	1620	1800	1460	1580	1480	1200	1040	1400	397	963
29	1360	1720	1680	1800	---	1090	1520	1160	746	1300	390	819
30	1160	1740	1820	1600	---	1130	1490	458	968	1360	388	780
31	1360	---	1840	1600	---	1370	---	274	---	1190	358	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	11.0	3.0	0.0	4.5	6.0	12.0	21.0	21.0	27.0	25.0	23.5
2	20.0	11.0	2.0	0.5	3.5	6.0	13.0	22.0	20.0	27.0	28.0	24.0
3	18.0	9.0	2.0	1.5	4.0	5.0	12.0	24.0	23.0	28.0	26.0	25.0
4	17.0	8.0	2.0	1.5	4.0	5.0	11.0	25.0	23.0	28.0	28.0	24.5
5	15.0	8.0	2.0	0.0	4.0	5.0	10.0	25.0	27.0	28.5	28.0	24.0
6	14.0	10.0	1.0	0.5	3.0	6.0	15.0	24.0	27.0	29.0	26.0	25.5
7	14.0	9.0	1.0	0.0	3.0	7.0	16.0	25.0	26.0	29.0	25.0	26.0
8	14.0	9.0	1.0	0.0	4.0	8.0	19.0	24.0	26.0	29.0	28.0	26.0
9	14.0	10.0	3.0	0.0	4.0	9.0	19.0	25.0	26.0	29.0	27.0	25.5
10	15.0	10.0	1.0	0.0	5.0	10.0	17.0	22.0	25.5	29.0	26.5	24.5
11	15.0	7.0	2.0	1.0	6.0	11.0	17.0	23.0	24.5	30.0	25.0	24.0
12	17.0	4.0	2.0	4.0	4.0	11.0	18.0	23.0	24.0	29.0	24.5	24.5
13	16.0	4.0	2.0	3.5	2.0	12.0	17.0	23.0	24.0	30.0	24.5	23.0
14	14.0	4.0	2.0	0.5	3.0	15.0	20.0	25.0	24.0	29.0	26.0	21.5
15	14.0	4.0	3.0	0.0	4.0	14.0	18.0	25.0	27.0	29.0	27.0	20.5
16	13.0	5.0	3.0	0.0	7.0	12.0	17.0	25.0	27.0	29.0	27.5	20.5
17	11.0	6.0	5.0	0.5	7.0	14.0	18.0	23.0	27.0	31.0	26.0	22.0
18	8.0	8.0	5.0	0.5	6.0	14.0	17.0	25.0	27.5	31.0	25.0	22.0
19	8.0	8.0	4.0	4.0	7.0	9.0	18.0	22.0	26.0	31.0	24.0	21.0
20	8.0	7.0	0.0	5.5	8.0	12.0	18.0	22.0	25.0	30.0	23.0	21.0
21	8.0	6.0	0.0	4.5	9.0	11.0	18.0	20.0	25.0	29.0	23.5	24.0
22	10.0	5.0	1.0	4.5	10.0	11.0	18.0	18.0	23.0	30.0	23.0	26.0
23	13.0	5.0	1.0	6.5	9.0	14.0	19.0	22.0	25.0	30.0	22.5	25.5
24	10.0	5.0	2.0	5.5	9.0	14.0	20.0	24.0	25.0	32.0	22.0	24.5
25	11.0	6.0	1.0	5.5	7.0	14.0	19.0	25.0	25.0	27.0	23.0	26.0
26	8.0	5.0	2.0	7.0	7.0	16.0	19.0	25.0	26.0	26.0	24.0	25.0
27	9.0	5.0	3.0	9.0	6.0	16.0	23.0	24.0	27.5	28.0	24.0	24.0
28	8.0	4.0	3.0	4.0	8.0	16.0	21.0	26.0	28.0	27.0	23.5	24.5
29	8.0	4.0	4.0	4.5	---	13.0	21.0	27.0	27.0	30.0	23.5	21.5
30	8.0	3.0	3.0	4.0	---	12.0	20.0	20.0	27.0	27.0	24.5	23.0
31	9.0	---	1.0	4.5	---	12.0	---	19.0	---	27.0	23.0	---

DISSOLVED CHLORIDE (CL), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230	220	270	310	300	230	210	240	29	130	200	24
2	190	210	270	310	290	220	260	240	24	87	86	16
3	220	240	250	300	280	270	240	230	30	66	100	26
4	280	260	260	300	270	220	210	230	47	140	140	54
5	330	280	260	290	260	270	190	210	150	140	110	70
6	390	270	260	290	250	230	240	240	170	140	22	65
7	20	270	260	300	240	240	210	240	180	140	13	82
8	22	270	280	300	230	250	180	200	170	170	110	100
9	50	280	260	310	220	260	240	260	81	170	44	88
10	80	260	260	310	220	260	200	190	90	170	83	75
11	150	280	280	300	210	270	250	260	110	180	120	76
12	160	260	250	300	200	280	250	280	120	180	150	98
13	160	270	260	300	190	290	250	280	140	180	120	120
14	120	260	260	300	220	300	250	280	48	190	120	85
15	120	260	270	290	220	300	260	280	62	190	150	52
16	130	230	240	290	210	270	260	240	86	190	120	75
17	160	240	260	300	220	290	220	280	120	200	150	96
18	140	240	260	300	240	270	200	260	150	210	120	110
19	170	240	250	290	230	280	130	240	120	230	97	110
20	170	230	260	290	230	310	160	180	120	230	98	120
21	160	240	270	280	230	250	190	240	90	240	98	120
22	180	240	270	280	230	270	220	50	46	240	98	130
23	180	260	250	290	230	290	160	58	44	240	92	130
24	190	250	260	290	230	240	190	62	45	240	61	130
25	190	250	250	280	230	240	180	110	90	150	54	140
26	190	250	240	290	230	270	210	130	42	190	48	140
27	160	260	260	290	230	240	230	140	52	220	41	140
28	190	260	270	300	230	270	230	180	160	230	34	140
29	200	260	280	310	---	150	240	180	91	200	26	110
30	160	270	310	300	---	170	240	46	140	210	31	100
31	200	---	320	310	---	220	---	19	---	180	24	---

06871000 NORTH FORK SOLOMON RIVER AT GLADE, KS

LOCATION.--Lat 39°40'40", long 99°18'30", in NW¼SW¼ sec.25, T.4 S., R.18 W., Phillips County, Hydrologic Unit 10260011, at downstream side of bridge on U.S. Highway 183, 0.5 mi (0.8 km) south of Glade.

DRAINAGE AREA.--849 mi² (2,200 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,754.04 ft (534.631 m) above mean sea level. Prior to Feb. 17, 1966, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--25 years, 32.0 ft³/s (0.906 m³/s), 23,180 acre-ft/yr (28.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,300 ft³/s (660 m³/s) June 16, 1957, gage height, 18.55 ft (present datum) (5.044 m); no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 20	unknown	2,170	61.4	[a]9.46	2.883
Sept. 3	unknown	* 2,500	70.8	[a]9.92	3.024

[a] From floodmark

No flow on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.00	.00	.00	.00	7.2	9.0	24	30	5.7	18	9.5
2	.00	.00	.00	.00	.00	7.6	9.4	132	22	4.7	16	9.0
3	.00	.00	.00	.00	.00	8.0	13	156	18	3.4	15	580
4	.00	.00	.00	.00	.00	7.6	15	52	16	2.3	12	200
5	.00	.00	.00	.00	.00	7.4	13	31	15	1.2	9.9	55
6	.00	.00	.00	.00	.00	7.5	12	25	13	.79	8.6	40
7	.00	.00	.00	.00	.00	7.4	11	23	11	.59	7.7	30
8	.00	.00	.00	.00	.00	7.3	11	22	11	.15	6.6	25
9	.00	.00	.00	.00	.00	7.2	9.8	22	11	.00	5.9	23
10	.00	.00	.00	.00	.00	7.3	9.4	22	10	.01	5.3	20
11	.00	.00	.00	.00	.00	22	8.7	19	9.1	.00	4.7	18
12	.00	.00	.00	.00	1.8	20	11	19	11	.00	4.5	16
13	.00	.00	.00	.00	6.4	12	16	18	11	.00	4.0	14
14	.00	.00	.00	.00	7.5	10	11	17	10	.00	3.4	12
15	.00	.00	.00	.00	7.0	9.1	9.8	16	45	.00	3.0	9.8
16	.00	.00	.00	.00	7.2	8.3	10	16	58	.00	4.2	9.0
17	.00	.00	.00	.00	8.0	8.2	10	15	28	.00	125	8.3
18	.00	.00	.00	.00	8.7	7.6	11	46	20	.00	110	7.5
19	.00	.00	.00	.00	8.1	9.5	17	53	14	.00	45	6.9
20	.00	.00	.00	.00	9.3	9.4	500	47	12	.00	24	6.6
21	.00	.00	.00	.00	9.1	8.1	168	42	10	.00	16	5.7
22	.00	.00	.00	.00	9.2	8.4	67	40	8.7	.00	13	4.9
23	.00	.00	.00	.00	9.2	8.4	49	32	7.7	.00	11	4.3
24	.00	.00	.00	.00	9.7	8.4	41	24	22	.00	10	3.5
25	.00	.00	.00	.00	8.6	8.4	35	22	28	.00	11	3.0
26	.00	.00	.00	.00	8.4	7.5	31	32	21	.00	28	2.7
27	.00	.00	.00	.00	8.1	7.2	29	30	40	100	65	2.1
28	.00	.00	.00	.00	8.1	8.7	27	26	19	200	45	2.1
29	.00	.00	.00	.00	---	9.4	25	40	11	80	25	2.5
30	.00	.00	.00	.00	---	8.4	26	43	7.8	35	15	2.7
31	.00	---	.00	.00	---	8.4	---	37	---	20	12	---
TOTAL	.15	.00	.00	.00	134.40	281.9	1215.1	1143	550.3	453.84	703.8	1133.1
MEAN	.005	.000	.000	.000	4.80	9.09	40.5	36.9	18.3	14.6	22.7	37.8
MAX	.15	.00	.00	.00	9.7	22	500	156	58	200	125	580
MIN	.00	.00	.00	.00	.00	7.2	8.7	15	7.7	.00	3.0	2.1
AC-FT	.3	.00	.00	.00	267	559	2410	2270	1090	900	1400	2250

CAL YR 1976 TOTAL 2410.42 MEAN 6.59 MAX 96 MIN .00 AC-FT 4780
WTR YR 1977 TOTAL 5615.67 MEAN 15.4 MAX 580 MIN .00 AC-FT 11140

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1964 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR					
13...	1715	13	770	243	8.5
MAY					
18...	1110	69	480	1950	363

06871500 BOW CREEK NEAR STOCKTON, KS

LOCATION.--Lat 39°33'46", long 99°17'04", in SW¼NW¼ sec.1, T.6 S., R.18 W., Rooks County, Hydrologic Unit 10260011, at downstream side of bridge on U.S. Highway 183, 8.5 mi (13.7 km) north of Stockton.

DRAINAGE AREA.--341 mi^2 (883 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,801.80 ft (549.189 m) above mean sea level. Prior to June 28, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--26 years, 14.7 ft^3/s (0.416 m^3/s), 10,650 acre-ft/yr (13.1 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft^3/s (365 m^3/s) July 12, 1951, gage height, 13.6 ft (4.15 m), from rating curve extended above 5,900 ft^3/s (167 m^3/s) on basis of contracted-opening measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 525 ft^3/s (15.2 m^3/s) Apr. 20, gage height, 6.74 ft (2.054 m), no peak above base of 600 ft^3/s (17.0 m^3/s); no flow Oct. 1-5, 14-16, July 19-21, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.65	2.5	1.7	1.4	4.7	3.7	7.4	29	3.7	7.5	2.4
2	.00	.70	2.6	1.4	1.5	5.2	3.8	13	27	2.6	5.9	2.5
3	.00	.70	2.9	1.2	1.7	5.1	3.8	9.4	18	1.9	5.9	2.1
4	.00	.77	3.1	1.1	1.8	4.6	4.4	6.9	15	1.5	4.7	2.2
5	.00	.84	3.0	.98	1.9	4.5	4.9	6.2	12	1.1	4.3	2.0
6	.16	.84	3.0	.92	2.1	4.7	5.0	5.9	8.8	.93	4.3	2.0
7	.40	.91	2.8	.84	2.3	4.5	5.0	5.4	7.4	.80	4.0	1.8
8	.16	1.1	2.9	.81	2.5	4.6	5.0	5.4	6.5	.79	3.5	1.7
9	.12	1.1	4.2	.78	2.8	4.3	4.8	6.4	6.0	.73	3.3	1.4
10	.10	1.1	4.0	.73	3.0	4.3	4.7	7.0	10	.61	3.0	1.3
11	.04	1.1	3.8	.70	3.4	6.6	4.7	5.5	7.8	.55	2.9	1.1
12	.04	.91	3.6	.66	3.8	6.1	5.0	5.0	6.2	.59	2.6	1.2
13	.02	.77	4.5	.64	4.2	5.0	5.5	4.7	6.1	.31	2.5	1.3
14	.00	.84	6.5	.62	4.6	4.8	5.4	4.6	5.4	.20	2.3	1.3
15	.00	.84	6.3	.61	5.0	4.4	5.1	4.4	4.5	1.5	2.1	1.3
16	.00	1.3	6.6	.60	4.7	4.2	5.1	4.3	4.0	.94	13	1.2
17	.02	1.5	9.1	.58	4.6	4.1	5.2	4.5	3.8	.46	30	.99
18	.04	2.1	8.7	.59	4.7	3.8	5.2	4.4	3.5	.11	9.8	.80
19	.04	1.6	7.1	.61	4.8	4.2	6.4	7.5	3.2	.00	4.6	.70
20	.06	1.8	5.1	.62	5.0	4.2	334	14	3.5	.00	3.7	.66
21	.06	1.6	5.0	.63	5.2	4.2	170	40	4.2	.00	3.3	.53
22	.08	1.5	6.0	.65	5.4	4.1	43	14	4.5	.02	3.8	.44
23	.10	1.6	6.8	.70	5.8	3.9	21	5.7	3.7	.01	3.3	.33
24	.08	2.0	7.4	.75	6.7	3.8	13	5.0	3.2	.00	3.0	.17
25	.08	1.9	8.0	.80	5.8	3.8	11	4.8	3.7	.51	3.0	.11
26	.12	1.3	7.8	.86	5.5	3.6	9.6	5.3	3.3	.31	2.6	.08
27	.20	.90	6.0	.92	5.2	3.7	9.2	6.0	2.9	67	7.3	.07
28	.35	.62	4.5	1.0	4.8	4.4	8.3	6.0	2.6	413	5.8	.10
29	.45	1.1	3.4	1.1	---	4.4	8.0	8.2	4.1	129	3.7	.19
30	.50	2.7	2.4	1.2	---	3.9	8.0	7.2	6.5	34	3.0	.43
31	.55	---	2.0	1.3	---	3.6	---	31	---	13	2.6	---
TOTAL	3.77	36.69	151.6	26.60	110.2	137.3	727.8	265.1	226.4	676.17	161.3	32.40
MEAN	.12	1.22	4.89	.86	3.94	4.43	24.3	8.55	7.55	21.8	5.20	1.08
MAX	.55	2.7	9.1	1.7	6.7	6.6	334	40	29	413	30	2.5
MIN	.00	.62	2.0	.58	1.4	3.6	3.7	4.3	2.6	.00	2.1	.07
AC-FT	7.5	73	301	53	219	272	1440	526	449	1340	320	64

CAL YR 1976 TOTAL 1508.33 MEAN 4.12 MAX 15 MIN .00 AC-FT 2990
WTR YR 1977 TOTAL 2555.33 MEAN 7.00 MAX 413 MIN .00 AC-FT 5070

06871700 KIRWIN RESERVOIR AT KIRWIN, KS

LOCATION.--Lat 39°39'49", long 99°07'29", in SE¼NE¼ sec.33, T.4 S., R.16 W., Phillips County, Hydrologic Unit 10260011, in control-house structure at outlet works of Kirwin dam on North Fork Solomon River, 0.5 mi (0.8 km) south of Kirwin, 1.6 mi (2.6 km) upstream from Deer Creek, and at mile 67.8 (109.1 km).

DRAINAGE AREA.--1,367 mi² (3,541 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--September 1955 to current year. Monthly records only prior to October 1956.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Aug. 7, 1957, nonrecording gages at same site and datum.

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Sept. 19, 1955. Total capacity, 512,000 acre-ft (633 hm³), consisting of the following: Dead storage, 6,400 acre-ft (7.89 hm³) below elevation 1,693.0 ft (516.03 m), sill of trashrack structure; irrigation pool, 93,300 acre-ft (115 hm³) between elevations 1,693.0 ft (516.03 m) and 1,729.3 ft (527.09 m); flood control pool, 214,900 acre-ft (265 hm³) between elevations 1,729.3 ft (527.09 m) and 1,757.3 ft (535.63 m), crest of uncontrolled spillway; and uncontrolled storage, 198,400 acre-ft (245 hm³) between elevations 1,757.3 ft (535.63 m) and 1,773.0 ft (540.41 m). Reservoir is used to store water for flood control and irrigation in Kirwin Unit of 11,500 acres (4,650 hm²), Missouri River Basin project. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,732.15 ft (527.959 m) June 10, 1961, contents, 114,900 acre-ft (142 hm³); minimum elevation since first filling of irrigation pool, 1,707.96 ft (520.586 m) Sept. 7, 1976, contents, 25,470 acre-ft (31.4 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,711.56 ft (521.683 m) June 6, contents, 32,940 acre-ft (40.6 hm³); minimum elevation, 1,700.64 ft (518.355 m) Aug. 15, contents, 14,030 acre-ft (17.3 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)

1,700	13,210	1,708	25,540
1,702	15,080	1,710	29,490
1,704	18,800	1,712	34,000
1,706	21,990		

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1708.20	1708.03	1707.88	1707.83	1707.84	1708.02	1708.40	1710.37	1711.47	1709.18	1703.24	1702.05
2	1708.20	1708.02	1707.88	1707.83	1707.84	1708.08	1708.42	1710.47	1711.52	1709.01	1703.06	1702.17
3	1708.20	1708.02	1707.88	1707.84	1707.86	1708.08	1708.47	1710.69	1711.52	1708.81	1702.86	1702.42
4	1708.17	1708.02	1707.88	1707.84	1707.86	1708.07	1708.49	1710.73	1711.55	1708.59	1702.66	1703.68
5	1708.15	1708.02	1707.88	1707.84	1707.85	1708.06	1708.50	1710.73	1711.55	1708.37	1702.50	1703.78
6	1708.16	1708.00	1707.88	1707.85	1707.85	1708.07	1708.51	1710.74	1711.54	1708.15	1702.32	1703.87
7	1708.19	1708.00	1707.88	1707.85	1707.85	1708.08	1708.51	1710.75	1711.54	1707.93	1702.14	1703.93
8	1708.19	1708.00	1707.87	1707.86	1707.85	1708.08	1708.53	1710.77	1711.54	1707.72	1701.91	1703.97
9	1708.19	1708.00	1707.87	1707.86	1707.85	1708.09	1708.56	1710.80	1711.51	1707.49	1701.69	1703.99
10	1708.19	1707.97	1707.87	1707.85	1707.84	1708.10	1708.57	1710.80	1711.45	1707.28	1701.44	1704.00
11	1708.18	1707.97	1707.87	1707.84	1707.85	1708.14	1708.54	1710.80	1711.36	1707.04	1701.27	1704.00
12	1708.18	1707.96	1707.86	1707.84	1707.85	1708.19	1708.59	1710.81	1711.34	1706.80	1701.10	1704.00
13	1708.18	1707.95	1707.86	1707.84	1707.85	1708.19	1708.59	1710.84	1711.30	1706.52	1700.94	1704.01
14	1708.13	1707.94	1707.86	1707.84	1707.85	1708.22	1708.61	1710.82	1711.22	1706.35	1700.79	1704.01
15	1708.13	1707.94	1707.85	1707.84	1707.85	1708.22	1708.61	1710.83	1711.13	1706.13	1700.66	1704.01
16	1708.12	1707.93	1707.85	1707.83	1707.86	1708.22	1708.62	1710.80	1711.07	1705.90	1700.71	1704.01
17	1708.09	1707.93	1707.85	1707.83	1707.88	1708.23	1708.63	1710.82	1711.00	1705.66	1700.80	1704.02
18	1708.07	1707.93	1707.85	1707.82	1707.89	1708.23	1708.65	1710.86	1710.88	1705.40	1701.14	1704.01
19	1708.06	1707.93	1707.87	1707.83	1707.91	1708.27	1708.76	1710.89	1710.81	1705.11	1701.35	1704.00
20	1708.04	1707.93	1707.85	1707.83	1707.91	1708.28	1709.46	1710.97	1710.69	1704.83	1701.43	1703.99
21	1708.04	1707.92	1707.84	1707.83	1707.93	1708.28	1709.95	1711.15	1710.57	1704.61	1701.46	1703.96
22	1708.04	1707.91	1707.83	1707.83	1707.98	1708.30	1710.05	1711.12	1710.44	1704.36	1701.55	1703.96
23	1708.04	1707.91	1707.83	1707.83	1708.03	1708.28	1710.09	1711.13	1710.32	1704.11	1701.61	1703.97
24	1708.03	1707.90	1707.83	1707.83	1708.02	1708.30	1710.14	1711.17	1710.21	1703.82	1701.65	1703.94
25	1708.02	1707.92	1707.83	1707.83	1708.02	1708.30	1710.18	1711.17	1710.10	1703.61	1701.74	1703.92
26	1708.02	1707.92	1707.83	1707.83	1708.02	1708.33	1710.22	1711.21	1709.98	1703.35	1701.77	1703.90
27	1708.03	1707.90	1707.83	1707.86	1708.03	1708.33	1710.29	1711.23	1709.86	1703.08	1701.82	1703.88
28	1708.04	1707.89	1707.84	1707.86	1708.03	1708.43	1710.29	1711.28	1709.69	1703.42	1701.92	1703.87
29	1708.03	1707.89	1707.85	1707.85	---	1708.39	1710.32	1711.29	1709.54	1703.60	1701.97	1703.87
30	1708.03	1707.88	1707.84	1707.85	---	1708.38	1710.34	1711.40	1709.36	1703.56	1702.05	1703.87
31	1708.03	---	1707.84	1707.85	---	1708.37	---	1711.43	---	1703.41	1702.03	---
MEAN	1708.11	1707.95	1707.86	1707.84	1707.90	1708.21	1709.13	1710.93	1710.87	1705.91	1701.73	1703.77
MAX	1708.20	1708.03	1707.88	1707.86	1708.03	1708.43	1710.34	1711.43	1711.55	1709.18	1703.24	1704.02
MIN	1708.02	1707.88	1707.83	1707.82	1707.84	1708.02	1708.40	1710.37	1709.36	1703.08	1700.66	1702.05
(+)	25,600	25,320	25,250	25,260	25,600	26,240	30,210	32,640	28,190	17,920	15,920	18,600
(‡)	-320	-280	-70	+10	+340	+640	+3,970	+2,430	-4,450	-10,270	-2,000	+2,680

CAL YR 1976 .... (‡) -27,590
WTR YR 1977 .... (‡) -7,320

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

06871800 NORTH FORK SOLOMON RIVER AT KIRWIN, KS

LOCATION.--Lat 39°39'36", long 99°06'66", in two channels, in SE¼ sec.33 (river outlet gage) and SW¼ sec.34 (spillway gage), T.4 S., R.16 W., Phillips County, Hydrologic Unit 10260012, 200 ft (61 m) and 600 ft (183 m), respectively, downstream from toe of Kirwin Dam, 0.5 mi (0.8 km) and 0.8 mi (1.3 km), respectively, south of Kirwin, 1.3 mi (2.1 km) upstream from Deer Creek, and at mile 67.2 (108.1 km).

DRAINAGE AREA.--1,367 mi² (3,541 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1919 to June 1925, August 1928 to June 1932, December 1941 to current year.

REVISED RECORDS.--WSP 1210: 1919(M). WSP 1440: 1919, 1929, 1931(M), 1942(P), 1944-47, 1948(M), drainage area (present and former sites).

GAGE.--Water-stage recorder and concrete control on river outlet channel. Datum of gage is 1,659.50 ft (505.816 m) above mean sea level (Bureau of Reclamation bench mark). Water-stage recorder on spillway channel. Datum of spillway channel gage is 1,650.81 ft (503.167 m) above mean sea level (Bureau of Reclamation bench mark). See WSP 1919 for history of changes prior to Jan. 30, 1967.

REMARKS.--Records poor. Flow completely regulated by Kirwin Reservoir since 1955 (see sta 06871700). Figures of flow do not include diversion immediately above station into Kirwin Main Canal. Separate records are collected and computed for a river outlet channel and for spillway channel. Figures given herein represent combined discharge.

AVERAGE DISCHARGE (since construction of Kirwin Dam).--22 years (water years 1956-77), 9.46 ft³/s (0.268 m³/s), 6,850 acre-ft/yr (8.45 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft³/s (680 m³/s) Sept. 18, 1919, gage height, 22.5 ft (6.86 m), site and datum then in use, from rating curve extended above 10,000 ft³/s (283 m³/s) on basis of slope-area and contracted-opening measurements at gage height 22.3 ft (6.80 m); maximum discharge since construction of Kirwin Dam in 1955, 1,200 ft³/s (34.0 m³/s) Nov. 16, 1966; no flow at times in 1943, 1948, 1955-67, 1972-77.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1915 reached a stage of about 27 ft (8.2 m), site and datum in use prior to July 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft³/s (0.71 m³/s) July 27-29; no flow Dec. 22, 23, Jan. 2 to Feb. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.04	.02	.01	.00	.01	.04	.09	.08	.04	.05	.04
2	.03	.04	.02	.00	.00	.01	.07	.09	.06	.04	.05	.06
3	.03	.04	.02	.00	.00	.01	.08	.09	.05	.03	.05	.06
4	.03	.04	.02	.00	.00	.01	.22	.07	.05	.03	.05	.06
5	.04	.04	.02	.00	.00	.01	.08	.06	.05	.03	.05	.08
6	.05	.04	.02	.00	.00	.03	.07	.06	.05	.03	.05	.08
7	.03	.04	.02	.00	.00	.06	.06	.06	.05	.03	.05	.06
8	.03	.04	.02	.00	.00	.11	.06	.06	.04	.02	.05	.06
9	.03	.04	.02	.00	.00	.11	.06	.05	.04	.04	.05	.05
10	.03	.04	.02	.00	.00	.11	.05	.05	.04	.08	.05	.05
11	.02	.04	.02	.00	.00	.31	.04	.04	.03	.05	.04	.05
12	.03	.04	.02	.00	.00	.31	.05	.04	.03	.04	.04	.06
13	.03	.04	.02	.00	.00	.08	.08	.03	.10	.03	.04	.06
14	.02	.05	.02	.00	.00	.08	.08	.02	.05	.02	.04	.05
15	.03	.06	.02	.00	.00	.07	.07	.02	.05	.02	.04	.05
16	.03	.06	.02	.00	.01	.06	.08	.02	.05	.02	2.0	.05
17	.02	.07	.02	.00	.01	.06	.08	.02	.05	.02	.05	.05
18	.03	.08	.01	.00	.01	.05	.11	.02	.05	.02	.05	.05
19	.03	.06	.01	.00	.01	.06	.12	.08	.05	.02	.04	.05
20	.03	.06	.01	.00	.01	.06	1.4	.08	.05	.07	.04	.05
21	.03	.05	.01	.00	.01	.05	.52	.40	.04	.05	.04	.05
22	.03	.05	.00	.00	.01	.05	.42	.14	.04	.05	.04	.05
23	.03	.07	.00	.00	.01	.04	.22	.08	.04	.05	.04	.04
24	.04	.07	.01	.00	.02	.03	.12	.05	.04	.04	.05	.04
25	.03	.06	.01	.00	.02	.03	.12	.04	.10	.04	.04	.04
26	.04	.06	.01	.00	.02	.03	.09	.04	.05	.04	.04	.04
27	.06	.05	.01	.00	.02	.03	.08	.05	.04	6.0	.04	.04
28	.05	.04	.01	.00	.02	.05	.07	.05	.04	25	.04	.04
29	.04	.04	.01	.00	---	.06	.08	.04	.04	14	.04	.04
30	.04	.03	.01	.00	---	.06	.09	.08	.04	.10	.04	.04
31	.05	---	.01	.00	---	.05	---	.26	---	.05	.04	---
TOTAL	1.04	1.48	.46	.01	.18	2.09	4.71	2.28	1.49	46.10	3.32	1.54
MEAN	.034	.049	.015	.000	.006	.067	.16	.074	.050	1.49	.11	.051
MAX	.06	.08	.02	.01	.02	.31	1.4	.40	.10	25	2.0	.08
MIN	.02	.03	.00	.00	.00	.01	.04	.02	.03	.02	.04	.04
AC-FT	2.1	2.9	.9	.02	.4	4.1	9.3	4.5	3.0	91	6.6	3.1

CAL YR 1976 TOTAL 40.65 MEAN .11 MAX 2.0 MIN .00 AC-FT 81
WTR YR 1977 TOTAL 64.70 MEAN .18 MAX 25 MIN .00 AC-FT 128

06871900 DEER CREEK NEAR PHILLIPSBURG, KS

LOCATION.--Lat 39°46'50", long 99°25'20", in NW¼NW¼ sec.24, T.3 S., R.19 W., Phillips County, Hydrologic Unit 10260012, at highway bridge 5.0 mi (8.0 km) west of Phillipsburg.

DRAINAGE AREA.--65.0 mi² (168.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WRD KS-75: 1967-69(P).

GAGE.--Water-stage recorder. Altitude of gage is 1,950 ft (594 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--11 years, 4.39 ft³/s (0.124 m³/s), 3,180 acre-ft/yr (3.92 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,190 ft³/s (147 m³/s) Sept. 3, 1977, gage height, 25.60 ft (7.803 m), from rating curve extended above 650 ft³/s (18.4 m³/s) on basis of contracted-opening measurement of 3,570 ft³/s (101 m³/s); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 20	0830	243	6.88	5.88	1.792	Aug. 5	1300	333	9.43	6.42	1.957
May 2	1545	4,220	120	22.72	6.925	Sept. 3	0245	* 5,190	147	25.60	7.803

Minimum discharge, no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.53	.06	.20	.10	2.2	.91	3.0	2.0	.39	.03	.00
2	.00	.50	.06	.15	.12	2.0	21	1280	1.8	.16	.00	42
3	.00	.52	.07	.09	.14	2.1	5.0	46	1.7	.05	.00	1850
4	.00	.59	.07	.06	.19	2.0	4.7	9.5	1.6	.00	.00	5.6
5	.00	.63	.08	.04	.22	1.9	4.0	6.6	1.6	.00	63	1.2
6	.36	.63	.08	.03	.26	1.9	3.2	5.6	1.5	.00	6.9	.77
7	.52	.58	.09	.02	.32	1.7	2.6	5.1	1.4	.00	1.6	.77
8	.27	.65	.10	.02	.39	1.7	2.5	4.9	1.4	.00	.56	.53
9	.20	.65	.11	.01	.49	1.8	2.2	5.1	1.4	.00	.11	.64
10	.08	.67	.12	.01	.56	1.9	1.9	4.7	1.3	.00	.00	.87
11	.07	.69	.14	.01	.70	4.1	1.7	4.3	1.1	.00	.00	.81
12	.00	.71	.15	.01	.76	3.6	2.1	4.1	1.3	.00	.00	1.5
13	.00	.50	.17	.00	.85	2.6	1.9	4.0	1.3	.00	.00	1.9
14	.02	.35	.20	.00	.86	1.6	1.7	3.9	1.3	.08	.00	1.6
15	.00	.23	.22	.00	.74	1.3	1.6	4.0	1.2	.32	.02	1.5
16	.00	.16	.25	.00	.60	1.1	1.6	3.9	1.1	.00	4.3	1.4
17	.09	.11	.28	.00	.70	1.2	1.6	3.8	1.0	.00	2.5	1.3
18	.23	.08	.33	.00	.82	1.0	2.1	3.8	1.0	.00	.82	1.2
19	.27	.07	.37	.00	.98	1.7	2.2	16	1.1	.00	.63	1.1
20	.31	.07	.42	.01	1.2	1.6	108	5.7	1.3	.02	.23	1.1
21	.31	.06	.49	.01	1.5	1.3	11	54	1.4	.00	.00	1.0
22	.36	.06	.57	.02	1.7	1.1	4.9	31	1.5	.00	.00	.82
23	.38	.06	.66	.02	2.0	.97	4.0	5.6	1.5	.00	.00	.82
24	.45	.05	.78	.02	2.5	.91	3.6	4.5	2.3	.00	.32	.69
25	.45	.05	.85	.03	3.0	.90	3.3	4.2	1.4	.21	1.8	.55
26	.44	.05	.93	.03	3.0	.90	3.1	4.2	1.0	.00	2.4	.58
27	.44	.05	1.0	.04	2.7	.83	2.9	8.8	.89	.00	.75	.47
28	.43	.05	1.0	.05	2.4	1.1	2.7	4.2	.81	.00	.11	.45
29	.48	.05	.92	.06	---	1.4	2.6	3.1	.70	.00	.00	.49
30	.56	.05	.50	.07	---	1.2	3.0	3.0	.55	.00	.00	.67
31	.54	---	.35	.05	---	.91	---	2.3	---	.00	.00	---
TOTAL	7.38	9.45	11.42	1.09	29.82	50.32	214.51	1548.9	39.45	1.23	86.08	1922.33
MEAN	.24	.32	.37	.035	1.07	1.62	7.15	50.0	1.32	.040	2.78	64.1
MAX	.56	.71	1.0	.20	3.0	4.1	108	1280	2.3	.39	63	1850
MIN	.00	.05	.06	.00	.10	.83	.91	2.3	.55	.00	.00	.00
AC-FT	15	19	23	2.2	59	100	425	3070	78	2.4	171	3810

CAL YR 1976 TOTAL 1163.72 MEAN 3.18 MAX 386 MIN .00 AC-FT 2310
WTR YR 1977 TOTAL 3921.98 MEAN 10.7 MAX 1850 MIN .00 AC-FT 7780

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

06872500 NORTH FORK SOLOMON RIVER AT PORTIS, KS

LOCATION.--Lat 39°33'16", long 98°41'31", in SW¼SW¼SW¼ sec.5, T.6 S., R.12 W., Osborne County, Hydrologic Unit 10260012, at downstream side of bridge on U.S. Highway 281, 0.5 mi (0.8 km) south of Portis, and at mile 27.0 (43.4 km).

DRAINAGE AREA.--2,315 mi² (5,996 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1945 to current year. Prior to Oct. 1, 1964, published as "near Downs".

GAGE.--Water-stage recorder. Datum of gage is 1,490.71 ft (454.368 m) above mean sea level. Prior to Dec. 5, 1946, nonrecording gage and Dec. 5, 1946, to Sept. 30, 1964, water-stage recorder at site 9.0 mi (14.5 km) downstream at datum 30.39 ft (9.263 m) lower.

REMARKS.--Records good except those for winter periods, which are poor. Flow partially regulated by Kirwin Reservoir 40.8 mi (65.6 km) upstream beginning Mar. 7, 1955 (see sta 06871700).

AVERAGE DISCHARGE.--32 years, 139 ft³/s (3.936 m³/s), 100,700 acre-ft/yr (124 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,700 ft³/s (1,010 m³/s) July 12, 1951, gage height, 30.41 ft (9.269 m), site and datum then in use, from rating curve extended above 21,000 ft³/s (595 m³/s); no flow at times in 1955-56.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1915, reached a stage about 1 ft (0.3 m) higher than that of July 12, 1951, from information by Kansas Highway Commission.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 1,400 ft³/s (39.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 4	0600	1,850	52.7	10.64	3.243
Sept. 5	0400	* 3,030	85.8	13.40	4.084

Minimum discharge, 7.8 ft³/s (0.22 m³/s) Nov. 27, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	23	23	17	21	30	23	40	35	24	28	19
2	24	23	24	16	21	30	24	42	31	26	29	172
3	22	23	25	15	21	33	24	65	29	25	27	206
4	21	22	26	14	21	30	28	946	28	24	26	824
5	20	23	27	13	22	30	30	160	27	24	34	1590
6	21	23	26	13	22	28	46	88	25	22	38	248
7	25	23	25	13	23	29	35	65	24	19	42	130
8	23	23	24	13	24	28	29	56	23	17	28	84
9	22	23	24	13	26	28	26	73	22	16	30	66
10	21	24	24	13	25	29	24	137	22	19	24	54
11	21	24	24	13	24	30	23	57	21	19	32	47
12	20	24	23	14	24	30	22	45	22	17	26	43
13	20	20	23	14	23	30	27	41	34	15	22	38
14	20	28	24	14	23	30	31	39	29	16	22	35
15	19	29	25	15	23	30	30	37	24	17	22	32
16	19	26	25	16	21	30	30	35	21	24	90	27
17	20	25	25	17	22	27	28	33	22	31	50	26
18	20	24	24	17	24	25	26	31	23	28	25	25
19	20	24	24	18	30	24	24	35	21	18	19	23
20	20	24	23	19	31	21	51	35	21	17	17	21
21	21	24	22	20	32	20	581	38	20	14	16	22
22	21	24	21	21	34	20	374	43	20	17	67	21
23	22	24	21	22	37	20	143	52	20	17	119	20
24	21	24	22	23	37	19	93	83	25	14	32	19
25	21	24	24	24	36	21	68	59	39	16	23	18
26	22	24	26	24	35	20	54	42	46	16	26	19
27	23	21	29	24	34	19	50	37	36	16	25	18
28	22	20	26	24	31	22	45	33	28	17	28	17
29	22	21	24	23	---	24	43	32	23	9.6	20	18
30	24	22	20	22	---	24	41	36	24	27	19	18
31	24	---	17	22	---	21	---	38	---	33	18	---
TOTAL	668	706	740	546	747	802	2073	2553	785	614.6	1024	3900
MEAN	21.5	23.5	23.9	17.6	26.7	25.9	69.1	82.4	26.2	19.8	33.0	130
MAX	27	29	29	24	37	33	581	946	46	33	119	1590
MIN	19	20	17	13	21	19	22	31	20	9.6	16	17
AC-FT	1320	1400	1470	1080	1480	1590	4110	5060	1560	1220	2030	7740

CAL YR 1976 TOTAL 14813.0 MEAN 40.5 MAX 390 MIN 16 AC-FT 29380
WTR YR 1977 TOTAL 15158.6 MEAN 41.5 MAX 1590 MIN 9.6 AC-FT 30070

06872500 NORTH FORK SOLOMON RIVER AT PORTIS, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
NOV										
26...	24	4.0	20	20	190	130	19	66	13	349
FEB										
15...	25	4.0	17	20	140	130	19	64	12	321
MAY										
10...	30	27.0	22	20	30	110	20	61	17	250
JUN										
20...	28	29.0	17	20	4	93	14	43	16	240
JUL										
10...	27	31.5	9.1	10	20	62	16	41	18	170
AUG										
09...	38	28.0	18	30	10	92	15	43	16	240
SEP										
15...	30	20.5	29	10	80	110	15	48	15	300

DATE	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
NOV										
26...	0	220	47	.3	2.3	.05	130	738	1.00	47.8
FEB										
15...	0	210	47	.2	2.1	.08	130	680	.92	47.4
MAY										
10...	0	220	49	.3	.10	.04	130	609	.83	49.3
JUN										
20...	8	150	36	.5	--	--	110	486	.66	36.7
JUL										
10...	0	120	35	.4	.09	.02	110	398	.54	29.9
AUG										
09...	0	150	32	.4	1.5	.12	120	496	.67	50.9
SEP										
15...	0	150	37	.4	--	--	120	579	.79	46.9

DATE	LOSS ON IGNITION (MG/L)	TOTAL RESIDUE (MG/L)	TURBIDITY (JTU)	HARDNESS (CA+MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
NOV									
26...	158	727	3	400	120	1.4	1040	7.7	13.1
FEB									
15...	149	685	4	400	140	1.4	1000	8.0	15.2
MAY									
10...	161	713	30	360	150	1.4	945	7.9	13.1
JUN									
20...	164	704	75	290	93	1.1	712	8.0	7.8
JUL									
10...	74	525	35	220	81	1.2	620	8.4	10.8
AUG									
09...	151	838	100	290	95	1.1	720	7.7	8.6
SEP									
15...	131	680	35	340	90	1.1	840	--	8.6

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
AUG				
09...	1240	40	350	39

06873000 SOUTH FORK SOLOMON RIVER ABOVE WEBSTER RESERVOIR, KS

LOCATION.--Lat 39°22'26", long 99°34'54", in SW¼NW¼ sec.8, T.8 S., R.20 W., Rooks County, Hydrologic Unit 10260013, at downstream side of highway bridge, 4.0 mi (6.4 km) north of Damar, 7.0 mi (11 km) downstream from Wild Horse Creek, and 11 mi (18 km) upstream from Webster Dam.

DRAINAGE AREA.--1,040 mi² (2,690 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1945 to current year. Prior to October 1953, published as "at Webster".

REVISED RECORDS.--WSP 1440: 1946-48, 1950.

GAGE.--Water-stage recorder. Datum of gage is 1,936.51 ft (590.248 m) above mean sea level (levels by Bureau of Reclamation). Prior to May 17, 1946, nonrecording gage, May 17, 1946, to May 20, 1951, water-stage recorder, and May 21 to Sept. 30, 1951, nonrecording gage, all at site 8.0 mi (13 km) downstream at datum 94.52 ft (28.810 m) lower. Oct. 1, 1951, to May 22, 1952, nonrecording gage at bridge near Stockton, 23 mi (37 km) downstream, at different datum. May 23, 1952, to May 23, 1954, water-stage recorder at site 8.0 mi (13 km) downstream at datum 94.52 ft (28.810 m) lower.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--32 years, 68.7 ft³/s (1.946 m³/s), 49,770 acre-ft/yr (61.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft³/s (1,560 m³/s) July 12, 1951, gage height, 14.9 ft (4.54 m), from floodmarks, site and datum then in use, from rating curve extended above 11,000 ft³/s (312 m³/s) on basis of slope-area measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known, that of July 12, 1951; second highest known, that of June 1908, 13.4 ft (4.08 m), present site and datum, from information obtained from Kansas State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,300 ft³/s (65.1 m³/s) Apr. 20, gage height, 7.22 ft (2.201 m), no peak above base of 3,200 ft³/s (90.6 m³/s); no flow Oct. 1-5, July 19-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.14	2.0	.10	.70	7.2	8.9	13	49	5.6	3.1	6.2
2	.00	.14	.32	.08	.76	7.9	9.1	12	44	4.3	2.2	5.4
3	.00	.13	.32	.07	.84	9.1	9.8	16	38	3.0	1.7	5.0
4	.00	.14	.29	.06	.90	7.5	12	13	34	1.7	1.3	5.2
5	.00	.16	.26	.06	1.0	5.4	12	10	37	.72	42	4.8
6	.02	.17	.17	.05	1.1	6.3	12	9.6	31	.43	40	3.7
7	.09	.16	.20	.05	.93	7.5	11	8.1	25	.31	9.7	3.1
8	.04	.18	.21	.04	1.2	7.5	10	7.8	22	.25	3.6	2.6
9	.02	.23	.23	.04	1.4	7.2	9.6	9.8	19	.20	2.0	2.3
10	.02	.21	.12	.03	3.8	7.9	9.2	16	16	.37	1.2	2.2
11	.02	.19	.08	.03	8.3	9.9	8.3	11	13	.24	.78	2.0
12	.01	.18	.17	.03	12	8.7	8.2	8.2	11	.17	.65	2.5
13	.03	.17	.16	.03	19	8.7	9.6	6.8	21	.15	.48	2.8
14	.04	.20	.18	.03	19	8.7	9.1	6.3	11	.16	.52	2.6
15	.04	.24	.12	.03	16	7.9	12	6.4	12	.38	.48	3.4
16	.04	.26	.11	.03	11	7.5	14	10	24	.17	.41	4.3
17	.05	.30	.12	.05	14	8.7	13	130	17	.12	.42	4.8
18	.07	.35	.08	.15	13	8.3	12	61	12	.05	.31	4.7
19	.06	.38	.12	.36	11	9.3	13	49	9.1	.00	.25	4.2
20	.08	.32	.18	.50	10	11	916	35	8.4	.00	.16	3.8
21	.08	.32	.18	.80	10	12	105	54	8.3	.00	.08	3.1
22	.10	.32	.30	1.1	11	12	40	63	7.4	.00	166	2.3
23	.11	.42	.44	1.2	9.9	11	27	94	6.7	.00	776	2.0
24	.10	.47	.68	1.3	9.9	10	21	87	8.2	.00	143	1.6
25	.11	.52	.68	1.2	9.5	9.4	17	59	94	27	56	.53
26	.15	.40	.74	1.2	8.7	9.4	16	53	46	1230	29	.55
27	.15	.19	1.1	1.0	7.9	8.9	14	193	28	184	18	.60
28	.12	.13	.88	.90	7.5	12	12	171	17	37	12	.65
29	.13	.10	.77	.76	---	12	11	91	11	16	9.5	.70
30	.14	.12	.53	.64	---	11	13	70	7.8	8.0	8.5	.75
31	.13	---	.12	.62	---	10	---	56	---	4.6	7.5	---
TOTAL	1.95	7.24	11.86	12.54	220.33	279.9	1394.8	1430.0	687.9	1524.92	1336.84	88.38
MEAN	.063	.24	.38	.40	7.87	9.03	46.5	46.1	22.9	49.2	43.1	2.95
MAX	.15	.52	2.0	1.3	19	12	916	193	94	1230	776	6.2
MIN	.00	.10	.08	.03	.70	5.4	8.2	6.3	6.7	.00	.08	.53
AC-FT	3.9	14	24	25	437	555	2770	2840	1360	3020	2650	175

CAL YR 1976 TOTAL 4231.98 MEAN 11.6 MAX 375 MIN .00 AC-FT 8390
WTR YR 1977 TOTAL 6996.66 MEAN 19.2 MAX 1230 MIN .00 AC-FT 13880

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-70, 1972 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY					
17...	1720	105	366	1980	561
18...	0800	64	400	974	168
JUN					
02...	1430	43	500	297	34

06873100 WEBSTER RESERVOIR NEAR STOCKTON, KS

LOCATION.--Lat 39°23'29", long 99°25'33", in SW¼NW¼NE¼ sec.3, T.8 S., R.19 W., Rooks County, Hydrologic Unit 10260013, on southeast shore near Webster Dam on South Fork Solomon River, 8 mi (12.9 km) west of Stockton, and at mile 92.4 (148.7 km).

DRAINAGE AREA.--1,150 mi² (2,980 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--June 1956 to current year. (Prior to October 1956, monthly records only.)

GAGE.--Water-stage recorder. Prior to July 31, 1968, elevations below 1,873 ft (570.9 m) from mercury-column gage near south end of dam read once daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began May 3, 1956. Total capacity, 401,600 acre-ft (495 hm³), consisting of the following: Dead storage, 2,184 acre-ft (2.96 hm³) below elevation 1,855.5 ft (565.56 m), sill of trashrack; irrigation pool, 74,250 acre-ft (91.6 hm³) between elevations 1,855.5 ft (565.56 m) and 1,892.2 ft (576.75 m); flood control pool, 184,300 acre-ft (227 hm³) between elevations 1,892.2 ft (576.74 m) and 1,923.7 ft (586.34 m); and uncontrolled storage, 140,900 acre-ft (174 hm³) between elevations 1,923.7 ft (586.34 m) and 1,938.0 ft (590.72 m). Reservoir is used to store water for flood control and irrigation in Webster Unit of approximately 8,500 acres (3,440 hm²), Missouri River Basin project. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,899.66 ft (579.016 m) June 10, 1961, contents, 107,600 acre-ft (133 hm³); minimum since first filling of irrigation pool, 1,857.33 ft (566.114 m) Oct. 23, 24, 1971, contents, 3,210 acre-ft (3.96 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,871.78 ft (570.519 m) June 13, 14, 15, contents, 21,220 acre-ft (26.2 hm³); minimum, 1,861.29 ft (567.321 m) Aug. 5, contents, 6,530 acre-ft (8.05 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)

1,860	5,300	1,868	14,900
1,862	7,260	1,870	18,100
1,864	9,480	1,872	21,610
1,866	12,020		

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1868.23	1868.08	1867.96	1867.86	1867.94	1867.94	1868.13	1869.88	1871.62	1869.71	1862.16	1863.30
2	1868.23	1868.07	1867.95	1867.88	1867.94	1867.98	1868.12	1869.92	1871.65	1869.50	1861.88	1863.33
3	1868.20	1868.07	1867.96	1867.88	1867.94	1867.96	1868.14	1869.96	1871.68	1869.30	1861.64	1863.36
4	1868.17	1868.05	1867.96	1867.89	1867.93	1867.96	1868.15	1869.96	1871.71	1869.01	1861.45	1863.37
5	1868.16	1868.07	1867.96	1867.90	1867.95	1867.96	1868.18	1869.97	1871.74	1868.74	1861.45	1863.40
6	1868.15	1868.05	1867.96	1867.91	1867.95	1867.98	1868.19	1869.98	1871.71	1868.48	1861.50	1863.40
7	1868.14	1868.05	1867.95	1867.91	1867.96	1867.99	1868.20	1869.98	1871.73	1868.23	1861.57	1863.40
8	1868.20	1868.06	1867.96	1867.89	1867.98	1867.99	1868.21	1870.02	1871.74	1867.98	1861.58	1863.35
9	1868.15	1868.05	1867.95	1867.88	1867.98	1868.00	1868.19	1870.04	1871.74	1867.70	1861.62	1863.35
10	1868.20	1868.02	1867.93	1867.88	1867.98	1867.98	1868.19	1870.06	1871.74	1867.46	1861.60	1863.33
11	1868.20	1868.00	1867.94	1867.88	1867.99	1868.02	1868.17	1870.08	1871.71	1867.19	1861.62	1863.32
12	1868.18	1867.98	1867.94	1867.91	1867.98	1868.04	1868.21	1870.10	1871.72	1866.91	1861.62	1863.32
13	1868.18	1867.99	1867.97	1867.90	1868.00	1868.06	1868.22	1870.09	1871.77	1866.61	1861.62	1863.31
14	1868.16	1867.98	1867.95	1867.91	1867.98	1868.05	1868.23	1870.10	1871.77	1866.34	1861.62	1863.29
15	1868.13	1867.99	1867.94	1867.88	1867.96	1868.05	1868.24	1870.09	1871.76	1866.14	1861.60	1863.27
16	1868.12	1868.00	1867.96	1867.88	1867.98	1868.08	1868.26	1870.07	1871.74	1865.84	1861.63	1863.27
17	1868.09	1868.00	1867.97	1867.86	1867.98	1868.08	1868.28	1870.14	1871.74	1865.53	1861.64	1863.25
18	1868.08	1868.02	1867.95	1867.90	1867.97	1868.07	1868.33	1870.26	1871.68	1865.20	1861.63	1863.22
19	1868.05	1868.00	1867.93	1867.90	1867.95	1868.08	1868.55	1870.36	1871.59	1864.88	1861.64	1863.21
20	1868.06	1867.99	1867.92	1867.92	1867.96	1868.06	1868.97	1870.39	1871.48	1864.53	1861.62	1863.20
21	1868.05	1867.98	1867.92	1867.92	1867.98	1868.08	1869.29	1870.55	1871.34	1864.23	1861.62	1863.18
22	1868.06	1867.98	1867.93	1867.93	1867.97	1868.09	1869.44	1870.61	1871.18	1863.97	1861.87	1863.18
23	1868.05	1867.98	1867.93	1867.93	1867.98	1868.10	1869.54	1870.67	1871.01	1863.68	1862.40	1863.14
24	1868.03	1867.99	1867.93	1867.93	1867.98	1868.09	1869.61	1870.76	1870.85	1863.38	1862.82	1863.12
25	1868.03	1867.99	1867.92	1867.94	1867.97	1868.10	1869.66	1870.84	1870.74	1863.11	1863.00	1863.11
26	1868.03	1867.95	1867.93	1867.94	1867.97	1868.10	1869.71	1870.91	1870.[illegible]5	1863.04	1863.08	1863.08
27	1868.05	1867.96	1867.93	1867.94	1867.97	1868.10	1869.74	1871.02	1870.52	1863.41	1863.13	1863.08
28	1868.05	1867.94	1867.89	1867.92	1867.94	1868.15	1869.76	1871.17	1870.33	1863.21	1863.19	1863.08
29	1868.05	1867.94	1867.90	1867.94	---	1868.14	1869.79	1871.32	1870.16	1862.98	1863.23	1863.08
30	1868.08	1867.96	1867.86	1867.91	---	1868.12	1869.83	1871.51	1869.92	1862.71	1863.27	1863.07
31	1868.08	---	1867.87	1867.94	---	1868.13	---	1871.57	---	1862.44	1863.28	---
MEAN	1868.12	1868.01	1867.94	1867.91	1867.97	1868.05	1868.71	1870.40	1871.36	1865.85	1862.05	1863.25
MAX	1868.23	1868.08	1867.97	1867.94	1868.00	1868.15	1869.83	1871.57	1871.77	1869.71	1863.28	1863.40
MIN	1868.03	1867.94	1867.86	1867.86	1867.93	1867.94	1868.12	1869.88	1869.92	1862.44	1861.45	1863.07
(†)	15,030	14,840	14,700	14,810	14,810	15,100	17,820	20,840	17,970	7,720	8,650	8,410
(‡)	-240	-190	-140	+110	0	+290	+2,720	+3,020	-2,830	-10,250	+930	-240

CAL YR 1976 .... (‡) -24,590
WTR YR 1977 .... (‡) -6,860

† CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

06873200 SOUTH FORK SOLOMON RIVER BELOW WEBSTER RESERVOIR, KS

LOCATION.--Lat 39°24'34", long 99°24'53", in SW¼SW¼SW¼ sec.26, T.7 S., R.19 W., Rooks County, Hydrologic Unit 10260014, 0.4 mi (0.6 km) downstream from Webster Dam, 1.1 mi (1.8 km) upstream from Sand Creek, 8.0 mi (13 km) west of Stockton, and at mile 92.0 (148 km).

DRAINAGE AREA.--1,150 mi² (2,980 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,828.50 ft (557.327 m) above mean sea level (Bureau of Reclamation bench mark). Prior to Apr. 9, 1963, water-stage recorders in two channels 0.2 mi (0.3 km) upstream at different datums.

REMARKS.--Records good. Flow completely regulated by Webster Reservoir (see sta 06873100).

AVERAGE DISCHARGE.--21 years, 47.7 ft³/s (1.351 m³/s), 34,560 acre-ft/yr (42.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,070 ft³/s (58.6 m³/s) July 10, 1962; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 222 ft³/s (6.29 m³/s) July 11, 12, gage height, 2.51 ft (0.765 m) no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	156	139	.00
2	.00	.00	.00	.00	.00	.00	.00	.01	.00	154	132	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.12	162	116	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	179	79	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	197	56	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	201	41	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	196	1.0	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	193	.33	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	192	.19	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	196	.27	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	214	.09	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	208	.07	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	195	.05	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	193	.04	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	190	.02	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	185	.03	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	183	.01	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	21	200	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	66	210	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	85	198	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	131	192	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	157	181	.06	.00
23	.00	.00	.00	.00	.00	.00	.01	.00	152	169	.01	.00
24	.00	.00	.00	.00	.00	.00	.01	.00	142	166	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.01	134	164	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.04	126	159	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.04	132	166	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.01	146	189	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	158	177	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.07	160	149	.00	.00
31	.00	---	.00	.00	---	.00	---	.04	---	146	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.02	.22	1610.12	5662	565.17	.00
MEAN	.000	.000	.000	.000	.000	.000	.001	.007	53.7	183	18.2	.000
MAX	.00	.00	.00	.00	.00	.00	.01	.07	160	214	139	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	146	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.04	.4	3190	11230	1120	.00

CAL YR 1976 TOTAL 13875.33 MEAN 37.9 MAX 241 MIN .00 AC-FT 27520
WTR YR 1977 TOTAL 7837.53 MEAN 21.5 MAX 214 MIN .00 AC-FT 15550

06873450 SOUTH FORK SOLOMON RIVER ABOVE WOODSTON DIVERSION, KS

LOCATION.--Lat 39°25'57", long 99°10'28", in SW¼NW¼ sec.24, T.7 S., R.17 W., Rooks County, Hydrologic Unit 10260014, on county bridge 4.0 mi (6.4 km) upstream from Woodston Diversion.

DRAINAGE AREA.--1,370 mi² (3,548 km²).

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971 to current year. Published as "above Woodston", July 1971 to September 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
OCT									
27...	1.5	4.0	12	60	150	110	20	59	13
NOV									
26...	1.1	2.5	12	80	130	130	21	61	11
FEB									
16...	.90	.0	18	50	180	140	22	69	11
MAY									
17...	1.2	32.5	23	20	160	140	22	81	16
JUN									
29...	114	27.0	4.3	20	8	87	20	45	16
JUL									
19...	168	27.0	6.0	20	8	83	21	49	17
AUG									
09...	15	33.0	13	20	20	88	22	50	16
SEP									
16...	.12	24.5	21	0	200	110	21	53	14

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT									
27...	242	0	200	77	.4	.24	.04	120	634
NOV									
26...	253	0	220	86	.3	.03	.05	110	695
FEB									
16...	295	0	230	99	.4	.15	.14	120	745
MAY									
17...	260	0	260	110	.5	.07	.24	140	780
JUN									
29...	160	0	190	56	.6	--	--	110	500
JUL									
19...	170	0	190	54	.6	.04	.04	110	515
AUG									
09...	200	0	190	63	.5	.33	.19	120	541
SEP									
16...	220	0	190	80	.5	--	--	120	612

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
OCT									
27...	.86	2.57	2	360	160	1.4	995	7.6	10.0
NOV									
26...	.95	2.06	2	410	200	1.3	1030	7.5	13.4
FEB									
16...	1.01	1.81	2	440	200	1.4	1150	7.5	12.5
MAY									
17...	1.06	2.53	3	440	230	1.7	1210	8.1	8.0
JUN									
29...	.68	154	20	300	170	1.1	765	7.9	8.0
JUL									
19...	.70	234	45	290	150	1.2	800	7.9	8.1
AUG									
09...	.74	21.9	10	310	150	1.2	807	7.8	6.5
SEP									
16...	.83	.20	3	360	180	1.2	910	--	8.9

06873700 KILL CREEK NEAR BLOOMINGTON, KS

LOCATION.--Lat 39°22'45", long 98°51'33", in NW¼NW¼ sec.11, T.8 S., R.14 W., Osborne County, Hydrologic Unit 10260014, at downstream side county highway bridge, 9.0 mi (14.5 km) southwest of Bloomington, and 9.6 mi (15.4 km) upstream from mouth.

DRAINAGE AREA.--52 mi² (135 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,670 ft (509.0 m), from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--14 years, 2.26 ft³/s (0.064 m³/s), 1,640 acre-ft/yr (2.02 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,370 ft³/s (124 m³/s) June 9, 1968, gage height, 18.90 ft (5.761 m), from rating curve extended above 1,000 ft³/s (28 m³/s) on basis of slope-area measurement; no flow most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 134 ft³/s (3.79 m³/s) Aug. 26, gage height, 6.65 ft (2.027 m), no peak above base of 300 ft³/s (8.50 m³/s); no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.01	.00	.00	3.2	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.41	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.25	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.89	1.8	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.42	2.5	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.28	.00	.00	.00	17	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.6	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.22	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	35	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	15	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.4	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.22	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.02	.00	1.91	9.56	.22	.00	83.63	.00
MEAN	.000	.000	.000	.000	.001	.000	.064	.31	.007	.000	2.70	.000
MAX	.00	.00	.00	.00	.01	.00	.89	3.2	.22	.00	35	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.04	.00	3.8	19	.4	.00	166	.00

CAL YR 1976 TOTAL 173.80 MEAN .47 MAX 2.6 MIN .00 AC-FT 345
WTR YR 1977 TOTAL 95.34 MEAN .26 MAX 35 MIN .00 AC-FT 189

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

06874000 SOUTH FORK SOLOMON RIVER AT OSBORNE, KS

LOCATION.--Lat 39°25'43", long 98°41'40", in SW¼NW¼SW¼ sec.20, T.7 S., R.12 W., Osborne County, Hydrologic Unit 10260014, at downstream side of bridge on U.S. Highway 281, 0.5 mi (0.8 km) south of Osborne, 0.6 mi (1.0 km) downstream from Covert Creek, and at mile 27.6 (44.4 km).

DRAINAGE AREA.--2,012 mi² (5,211 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,505.09 ft (458.751 m) above mean sea level. Prior to Dec. 12, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated since 1956 by Webster Reservoir 64.8 mi (104 km) upstream (see sta 06873100). Diversions above station for irrigation. Occasional low water regulation by Osborne city reservoir 1.5 mi (2.4 km) upstream.

AVERAGE DISCHARGE.--31 years, 127 ft³/s (3.597 m³/s), 92,010 acre-ft/yr (113 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,200 ft³/s (2,300 m³/s) July 13, 1951, gage height, 27.65 ft (8.428 m), from rating curve extended above 16,000 ft³/s (453 m³/s) on basis of slope-area and contracted-opening measurement of peak flow; no flow Aug. 21, 1946, Apr. 21, 1948, Aug. 8, 1968, July 12, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Aug. 22	2400	* 2,140	60.6	14.97	4.563
Aug. 26	0500	744	21.1	9.72	2.963

Minimum discharge, no flow part of day July 12 (result of regulation).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	13	9.5	11	17	14	14	28	4.9	4.7	35
2	11	13	14	10	12	18	14	19	26	4.1	.96	53
3	11	12	14	11	13	18	14	19	18	4.1	1.2	34
4	27	12	14	11	13	18	16	17	15	4.1	4.2	34
5	115	12	14	11	13	18	15	16	13	4.1	4.6	30
6	16	12	14	12	13	18	15	16	10	4.2	11	29
7	12	12	12	13	14	18	15	15	8.9	4.0	6.5	26
8	11	12	13	11	14	18	14	15	9.5	3.9	41	24
9	11	13	15	10	15	17	14	19	11	3.9	26	22
10	11	12	14	9.0	20	16	13	16	13	3.7	11	20
11	11	13	12	9.0	21	16	13	16	7.0	3.4	15	19
12	10	12	14	9.5	21	14	14	16	8.8	2.7	13	18
13	10	11	14	10	20	14	18	15	10	1.9	15	17
14	11	13	16	10	19	13	20	13	9.6	1.4	23	15
15	11	14	14	11	18	13	16	13	9.0	1.7	18	14
16	11	14	14	9.5	18	12	16	13	9.0	1.5	162	13
17	11	14	15	9.0	19	12	15	12	8.9	2.4	98	12
18	11	14	14	9.0	18	12	14	12	9.0	1.6	34	13
19	11	14	14	10	18	13	15	15	8.6	1.3	22	12
20	12	13	15	11	17	12	59	20	8.2	.66	17	8.6
21	12	13	13	13	17	12	72	17	13	1.3	14	5.0
22	12	12	15	13	17	12	42	15	8.8	1.4	377	9.5
23	12	13	15	14	18	13	36	14	7.9	5.6	971	11
24	12	13	15	14	18	12	32	14	18	3.9	116	10
25	12	13	15	15	18	12	27	14	45	3.9	62	9.9
26	12	14	14	17	18	12	22	14	13	3.2	431	10
27	13	11	16	18	18	12	20	13	9.1	3.6	169	9.9
28	12	10	15	14	18	14	20	9.3	8.5	4.2	91	10
29	12	11	15	11	---	14	20	12	7.3	4.5	63	11
30	13	13	12	10	---	15	17	15	6.6	3.2	45	12
31	13	---	9.0	10	---	14	---	35	---	1.6	40	---
TOTAL	481	378	433.0	354.5	469	449	652	483.3	377.7	95.46	2905.16	546.9
MEAN	15.5	12.6	14.0	11.4	16.8	14.5	21.7	15.6	12.6	3.08	93.7	18.2
MAX	115	14	16	18	21	18	72	35	45	5.6	971	53
MIN	10	10	9.0	9.0	11	12	13	9.3	6.6	.66	.96	5.0
AC-FT	954	750	859	703	930	891	1290	959	749	189	5760	1080

CAL YR 1976 TOTAL 7548.60 MEAN 20.6 MAX 115 MIN 4.6 AC-FT 14970
WTR YR 1977 TOTAL 7625.02 MEAN 20.9 MAX 971 MIN .66 AC-FT 15120

06874000 SOUTH FORK SOLOMON RIVER AT OSBORNE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)
OCT 26...	12	7.0	21	20	40	140	19	75	11
NOV 26...	15	4.0	15	20	70	130	19	75	10
FEB 15...	17	3.5	13	10	120	120	18	66	9.4
MAY 17...	12	21.5	26	10	60	140	19	79	11
JUN 28...	9.8	29.0	24	40	4	130	18	71	13
JUL 19...	1.2	24.0	25	30	260	130	21	150	16
AUG 09...	28	30.5	15	30	20	76	14	40	15
SEP 16...	12	23.0	26	0	70	140	19	73	11

DATE	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT 26...	324	0	230	72	.3	3.1	.13	150	697
NOV 26...	303	0	210	81	.3	2.4	.22	130	754
FEB 15...	277	0	200	70	.3	1.6	.11	130	656
MAY 17...	320	0	230	86	.4	1.8	.35	160	756
JUN 28...	280	0	210	76	.5	--	--	160	690
JUL 19...	270	0	220	200	.4	.66	1.6	240	903
AUG 09...	160	0	140	49	.4	.71	.12	110	441
SEP 16...	310	0	210	89	.4	--	--	150	735

DATE	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TUR-BID-ITY (JTU)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	DIS-SOLVED OXYGEN (MG/L)
OCT 26...	.95	22.6	7	430	160	1.6	1140	7.7	12.6
NOV 26...	1.03	30.5	2	400	150	1.6	1120	7.8	13.1
FEB 15...	.89	30.1	3	370	150	1.5	1020	8.0	15.8
MAY 17...	1.03	24.5	45	430	170	1.7	1190	7.6	7.0
JUN 28...	.94	16.8	75	400	170	1.5	995	8.2	9.9
JUL 19...	1.23	3.02	20	410	190	3.2	1450	7.4	3.4
AUG 09...	.60	33.3	65	250	120	1.1	660	7.6	7.0
SEP 16...	1.00	25.2	20	430	170	1.5	1070	--	10.8

06874200 WACONDA LAKE AT GLEN ELDER, KS

LOCATION.--Lat 39°29'46", long 98°18'48", in SW¼SE¼SW¼ sec.27, T.6 S., R.9 W., Mitchell County, Hydrologic Unit 10260015, in outlet structure of Glen Elder Dam on Solomon River, southwest edge of Glen Elder, and at mile 172.4 (277.4 km).

DRAINAGE AREA.--5,076 mi² (13,150 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--January 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to June 4, 1969, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by compacted earthfill dam. Date of closure was Oct. 18, 1967. Regulated storage began Jan. 1, 1969. Total capacity, 1,128,700 acre-ft (1,390 hm³) consisting of the following: Dead storage, 1,236 acre-ft (1.52 hm³) below elevation 1,407.8 ft (429.10 m); conservation pool, 240,200 acre-ft (296 hm³) between elevations 1,407.8 ft (429.10 m) and 1,455.6 ft (443.67 m); flood control pool, 722,300 acre-ft (891 hm³) between elevations 1,455.6 ft (443.67 m) and 1,488.3 ft (453.63 m); and surcharge pool, 165,000 acre-ft (203 hm³) between elevations 1,488.3 ft (453.63 m) and 1,492.9 ft (455.04 m). Figures given herein represent total contents.

Inflow partially regulated by Webster Reservoir (see sta 06873100) and Kirwin Reservoir (see sta 06871700). Diversions for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,465.26 ft (446.611 m) Oct. 20, 1973, contents, 384,300 acre-ft (474 hm³); minimum since pool first filled, 1,434.89 ft (437.354 m) Oct. 4, 12, 1969, contents, 65,440 acre-ft (80.7 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,454.30 ft (443.271 m) Sept. 8, contents, 225,400 acre-ft (278 hm³); minimum, 1,451.71 ft (442.481 m) Aug. 14, 15, contents, 195,700 acre-ft (241 hm³).

Capacity table (elevation, in feet, and contents, in acre-ft)
(Based on survey made in June 1970 by U.S. Bureau of Reclamation)

1,450	177,600	1,454	221,800
1,452	198,800	1,456	246,500

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1452.10	1452.10	1452.04	1452.00	1452.12	1452.17	1452.35	1452.68	1453.12	1452.97	1451.75	1453.38
2	1452.09	1452.07	1452.03	1452.00	1452.12	1452.23	1452.31	1452.74	1453.11	1452.96	1451.78	1453.49
3	1452.12	1452.08	1452.04	1452.02	1452.12	1452.26	1452.35	1452.77	1453.09	1453.93	1451.76	1453.69
4	1452.17	1452.06	1452.04	1452.07	1452.13	1452.25	1452.39	1452.83	1453.11	1452.87	1451.81	1453.92
5	1452.16	1452.07	1452.04	1452.08	1452.14	1452.23	1452.36	1452.88	1453.10	1452.82	1451.79	1454.16
6	1452.19	1452.07	1452.04	1452.10	1452.14	1452.21	1452.35	1452.90	1453.05	1452.79	1451.83	1454.24
7	1452.21	1452.07	1452.03	1452 11	1452.13	1452.21	1452.34	1452.92	1453.04	1452.71	1451.81	1454.26
8	1452.23	1452.07	1452.02	1452.11	1452.13	1452.21	1452.33	1452.90	1453.02	1452.70	1451.77	1454.27
9	1452.21	1452.08	1452.03	1452.11	1452.15	1452.20	1452.34	1452.98	1452.98	1452.67	1451.80	1454.26
10	1452.21	1452.07	1452.00	1452.09	1452.16	1452.23	1452.35	1453.00	1452.95	1452.68	1451.74	1454.24
11	1452.23	1452.06	1452.00	1452.09	1452.15	1452.28	1452.32	1453.02	1452.92	1452.64	1451.77	1454.22
12	1452.22	1452.06	1452.01	1452.07	1452.15	1452.32	1452.39	1453.02	1452.92	1452.63	1451.76	1454.24
13	1452.22	1452.05	1452.01	1452.10	1452.17	1452.29	1452.38	1453.02	1452.96	1452.58	1451.75	1454.24
14	1452.18	1452.05	1452.02	1452.10	1452.16	1452.29	1452.36	1453.00	1452.95	1452.52	1451.71	1454.23
15	1452.17	1452.05	1452.03	1452.10	1452.17	1452.28	1452.36	1453.02	1452.94	1452.48	1451.75	1454.20
16	1452.16	1452.06	1452.03	1452.09	1452.18	1452.25	1452.37	1452.98	1452.90	1452.44	1451.90	1454.18
17	1452.10	1452.05	1452.03	1452.10	1452.21	1452.28	1452.40	1452.99	1452.88	1452.39	1451.93	1454.20
18	1452.13	1452.06	1452.04	1452.09	1452.19	1452.23	1452.42	1453.01	1452.87	1452.35	1451.95	1454.19
19	1452.09	1452.05	1452.04	1452.10	1452.20	1452.27	1452.42	1453.01	1452.87	1452.28	1451.96	1454.17
20	1452.09	1452.07	1452.03	1452.10	1452.20	1452.26	1452.43	1453.04	1452.85	1452,22	1451.94	1454.11
21	1452.07	1452.06	1452.02	1452.10	1452.20	1452.26	1452.51	1453.18	1452.93	1452.18	1451.95	1454.16
22	1452.06	1452.03	1452.02	1452.10	1452.24	1452.25	1452.62	1453.05	1452.93	1452.16	1452.16	1454.12
23	1452.06	1452.03	1452.02	1452.10	1452.27	1452.22	1452.67	1453.05	1452.93	1457.12	1452.64	1454.15
24	1452.06	1452.05	1452.03	1452.10	1452.25	1452.22	1452.69	1453.05	1453.10	1451.98	1452.81	1454.13
25	1452.05	1452.05	1452.04	1452.10	1452.23	1452.21	1452.70	1453.06	1453.10	1451.97	1452.93	1454.12
26	1452.04	1452.06	1452.05	1452.13	1452.23	1452.24	1452.71	1453.07	1453.10	1451.96	1453.08	1454.09
27	1452.05	1452.06	1452.05	1452.14	1452.23	1452.26	1452.71	1453.07	1453.10	1451.93	1453.28	1454.07
28	1452.08	1452.04	1452.04	1452.13	1452.20	1452.45	1452.71	1453.05	1453.07	1451.86	1453.34	1454.05
29	1452.06	1452.03	1452.05	1452.13	---	1452.38	1452.69	1453.11	1453.04	1451.86	1453.36	1454.05
30	1452.10	1452.05	1452.03	1452.13	---	1452.35	1452.69	1453.11	1453.01	1451.82	1453.38	1454.05
31	1452.09	---	1452.00	1452.12	---	1452.33	---	1453.12	---	1451.79	1453.38	---
MEAN	1452.13	1452.06	1452.03	1452.09	1452.18	1452.26	1452.47	1452.99	1453.00	1452.43	1452.21	1454.11
MAX	1452.23	1452.10	1452.05	1452.14	1452.27	1452.45	1452.71	1453.18	1453.12	1453.93	1453.38	1454.27
MIN	1452.04	1452.03	1452.00	1452.00	1452.12	1452.17	1452.31	1452.68	1452.85	1451.79	1451.71	1453.38
(+)	199,800	199,400	198,800	200,200	201,100	202,500	206,600	211,500	210,200	196,500	214,500	222,400
(*)	-100	-400	-600	+1,400	+900	+1,400	+4,100	+4,900	-1,300	-13,700	+18,000	+7,900

CAL YR 1976 .... (*) -38,600
WTR YR 1977 .... (*) +22,500

06875900 SOLOMON RIVER NEAR GLEN ELDER, KS

LOCATION.--Lat 39°28'27", long 98°16'58", in SE¼SE¼NE¼ sec.2, T.7 S., R.9 W., Mitchell County, Hydrologic Unit 10260015, near right bank, 3.6 mi (5.8 km) downstream from Glen Elder Dam, 2.0 mi (3.2 km) southeast of Glen Elder, and at mile 168.8 (271.6 km).

DRAINAGE AREA.--5,340 mi² (13,830 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Concrete control since March 4, 1970. Datum of gage is 1,374.13 ft (418.835 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Records good. Flow mostly regulated by Waconda Lake (see sta 06874200) which in turn is moderately regulated by Kirwin Reservoir (see sta 06871700) and Webster Reservoir (see sta 06873100). Large diversions below Kirwin and Webster Reservoirs and many small diversion above Waconda Lake for irrigation.

AVERAGE DISCHARGE.--13 years, 141 ft³/s (3.993 m³/s), 102,200 acre-ft/yr (126 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,890 ft³/s (195 m³/s) July 30, 1967, gage height, 26.89 ft (8.196 m); minimum, 0.32 ft³/s (0.009 m³/s) Nov. 22, 23, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) Sept. 2, gage height, 15.75 ft (4.801 m); minimum, 1.0 ft³/s (0.028 m³/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	15	14	14	24	25	25	21	21	16	86	15
2	27	15	14	14	25	25	26	21	21	14	84	925
3	27	16	14	14	25	25	26	21	21	34	79	872
4	29	16	14	19	25	25	26	21	21	75	68	161
5	18	16	14	26	25	26	26	21	21	72	51	81
6	2.0	16	14	26	25	26	26	21	19	59	38	34
7	1.8	16	14	26	24	26	26	20	17	53	31	17
8	4.7	16	14	25	25	26	27	21	18	71	32	9.9
9	15	17	14	25	25	26	27	21	18	92	27	7.0
10	15	16	13	25	25	26	27	20	18	100	20	5.6
11	15	15	14	25	25	27	27	20	15	90	19	5.0
12	15	15	14	26	25	26	27	21	19	79	16	9.0
13	15	15	14	30	25	26	26	21	18	78	17	22
14	15	15	14	27	25	26	26	21	14	83	16	7.2
15	15	16	14	25	24	26	26	21	15	90	17	6.8
16	15	16	14	19	25	25	26	20	16	88	120	12
17	15	16	14	22	25	25	26	21	18	90	231	21
18	15	16	14	26	25	25	26	21	16	92	48	21
19	15	16	14	29	25	25	26	22	17	91	26	20
20	15	16	13	28	25	25	24	21	17	88	19	21
21	15	15	14	26	25	25	21	23	28	86	12	21
22	15	14	14	25	25	25	21	21	40	97	28	21
23	16	14	14	25	25	25	21	21	65	148	325	22
24	15	14	14	25	25	25	20	21	47	130	50	21
25	15	14	14	25	25	25	21	21	46	114	21	21
26	15	14	14	25	25	25	21	21	35	103	16	21
27	15	14	14	25	25	26	21	22	28	97	15	21
28	15	13	14	24	25	29	21	22	6.3	98	18	21
29	15	14	14	25	---	25	21	22	24	98	35	21
30	15	14	13	24	---	25	21	22	24	98	22	21
31	15	---	14	25	---	25	---	22	---	92	18	---
TOTAL	482.5	455	431	745	697	792	731	655	703.3	2616	1605	2483.5
MEAN	15.6	15.2	13.9	24.0	24.9	25.5	24.4	21.1	23.4	84.4	51.8	82.8
MAX	29	17	14	30	25	29	27	23	65	148	325	925
MIN	1.8	13	13	14	24	25	20	20	6.3	14	12	5.0
AC-FT	957	902	855	1480	1380	1570	1450	1300	1390	5190	3180	4930

CAL YR 1976 TOTAL 29754.5 MEAN 81.3 MAX 500 MIN 1.8 AC-FT 59020
WTR YR 1977 TOTAL 12396.3 MEAN 34.0 MAX 925 MIN 1.8 AC-FT 24590

06875900 SOLOMON RIVER NEAR GLEN ELDER, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	HARD-NESS (CA,MG) (MG/L)
OCT 26...	14	978	7.5	8.0	7	9.9	130	37	200	310
NOV 26...	14	990	7.5	4.5	6	11.5	--	--	--	320
FEB 15...	25	1060	7.5	1.0	3	13.2	40	B10	86	340
MAY 18...	21	990	8.0	25.0	15	10.4	160	130	170	310
JUN 28...	4.0	885	7.6	25.0	65	5.0	--	--	--	300
JUL 18...	93	895	8.0	26.0	10	8.6	--	--	--	290
AUG 09...	35	920	7.8	24.0	15	6.6	--	--	--	290
SEP 15...	7.0	940	--	18.0	35	6.6	--	--	--	300

B Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT 26...	170	91	20	76	1.9	17	176	0	250	88
NOV 26...	180	96	21	76	1.8	17	170	0	240	82
FEB 15...	170	100	22	76	1.8	16	209	0	250	82
MAY 18...	180	93	20	75	1.8	17	170	0	240	80
JUN 28...	150	91	18	71	1.8	16	190	0	200	76
JUL 18...	160	83	21	75	1.9	17	160	0	220	71
AUG 09...	170	83	21	74	1.9	17	150	0	240	82
SEP 15...	140	88	19	74	1.9	17	190	0	210	65

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT 26...	.3	4.6	624	.85	23.6	.01	120	10	80
NOV 26...	.3	3.9	647	.88	24.5	.00	120	20	100
FEB 15...	.4	6.2	670	.91	45.2	.02	120	10	160
MAY 18...	.4	2.5	609	.83	34.5	.02	120	30	50
JUN 28...	.4	8.6	577	.78	6.23	--	120	30	120
JUL 18...	.4	3.6	593	.81	149	.01	100	10	20
AUG 09...	.3	4.7	604	.82	57.1	.01	130	10	50
SEP 15...	.3	9.3	606	.82	11.5	--	130	70	210

06876700 SALT CREEK NEAR ADA, KS

LOCATION.--Lat 39°08'30", long 97°50'10", in NW¼NW¼SW¼ sec.36, T.10 S., R.5 W., Ottawa County, Hydrologic Unit 10260015, at downstream side of highway bridge, 3.0 mi (4.8 km) southeast of Ada, and 19.4 mi (31.2 km) upstream from mouth.

DRAINAGE AREA.--384 mi^2 (995 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,247.18 ft (380.140 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--18 years, 55.7 ft^3/s (1.577 m^3/s), 40,350 acre-ft/yr (49.8 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft^3/s (453 m^3/s) May 23, 1961, gage height, 23.25 ft (7.087 m); no flow at times in 1964, 1966, 1968, and 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1897, that of May 23, 1961. Flood in 1942 reached a stage of about 21 ft (6.4 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 580 ft^3/s (16.4 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 4	2000	* 1,960	55.5	19.28	5.876
May 31	1200	947	26.8	17.04	5.194

Minimum discharge, 0.82 ft^3/s (0.023 m^3/s) July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	9.8	8.6	5.5	12	9.7	19	19	494	4.6	8.7	156
2	1.4	9.5	8.7	7.0	14	9.1	13	30	240	5.6	5.1	83
3	4.6	9.0	9.1	6.5	17	9.5	12	21	83	5.1	2.3	31
4	1180	8.8	9.3	5.5	19	9.5	14	14	48	4.2	2.8	25
5	1300	8.0	9.4	5.0	21	10	13	11	37	3.5	4.6	15
6	1150	7.7	9.7	4.5	22	11	14	8.9	27	3.1	93	13
7	940	7.8	9.9	4.3	21	12	16	8.0	21	2.9	263	12
8	282	8.2	9.9	4.2	21	10	14	7.6	18	2.9	153	12
9	64	8.5	10	3.8	22	9.0	12	7.2	16	2.7	37	9.4
10	41	8.6	10	3.6	24	9.0	9.5	6.7	13	2.7	13	8.7
11	28	8.5	9.9	3.5	24	11	8.9	6.4	11	2.5	8.1	9.3
12	23	8.4	9.5	3.8	24	22	8.5	6.1	10	2.4	5.2	9.0
13	22	8.3	9.5	4.2	24	43	8.1	6.1	29	2.3	3.0	8.8
14	18	8.2	9.6	4.6	23	29	8.1	6.2	46	2.1	4.6	8.3
15	16	8.2	10	5.0	22	18	9.0	5.7	13	1.8	4.8	8.5
16	14	8.5	11	5.4	19	13	10	5.2	9.0	1.8	6.1	8.1
17	11	8.9	11	5.8	16	11	12	6.7	7.7	1.6	46	7.9
18	9.8	9.0	11	6.2	14	9.5	12	7.2	7.2	1.6	100	7.5
19	9.8	9.5	12	6.6	14	8.3	14	5.9	6.7	1.2	55	7.1
20	9.3	9.6	12	6.8	13	8.6	31	5.2	6.6	1.2	19	6.1
21	8.4	9.2	11	7.2	13	8.8	30	72	33	1.1	8.6	6.1
22	7.6	8.8	11	7.6	13	8.6	27	79	87	1.4	7.1	5.7
23	8.0	8.6	10	7.8	13	8.1	25	36	31	2.6	90	5.8
24	7.9	8.2	9.7	8.2	12	7.7	25	20	16	1.9	333	4.9
25	8.4	8.4	9.5	8.5	11	7.5	21	11	11	1.6	322	5.6
26	8.6	7.5	9.7	8.7	11	7.6	15	7.8	8.2	1.4	146	5.1
27	9.6	7.0	10	7.2	11	7.7	12	8.2	7.1	1.3	52	5.8
28	9.4	6.8	8.0	6.2	11	12	11	8.9	6.2	1.3	209	6.6
29	10	7.7	6.0	7.2	---	19	10	116	5.4	1.2	207	6.4
30	10	8.6	5.0	8.4	---	32	9.5	418	5.1	1.2	161	6.8
31	9.6	---	4.5	10	---	33	---	918	---	15	59	---
TOTAL	5147.8	254.6	294.5	188.8	481	424.2	443.6	1888.0	1361.2	85.4	2549.6	504.5
MEAN	166	8.49	9.50	6.09	17.2	13.7	14.8	60.9	45.4	2.75	82.2	16.8
MAX	1300	9.8	12	10	24	43	31	918	494	15	333	156
MIN	1.4	6.8	4.5	3.5	11	7.5	8.1	5.2	5.1	1.1	2.3	4.9
AC-FT	10210	505	584	374	954	841	880	3740	2700	169	5060	1000

CAL YR 1976 TOTAL 14733.02 MEAN 40.3 MAX 1300 MIN .53 AC-FT 29220
WTR YR 1977 TOTAL 13622.40 MEAN 37.3 MAX 1300 MIN 1.1 AC-FT 27020

06876900 SOLOMON RIVER AT NILES, KS

LOCATION.--Lat 38°58'08", long 97°28'34", in NW¼SE¼NW¼ sec.31, T.12 S., R.1 W., Ottawa County, Hydrologic Unit 10260015, at downstream side of county highway bridge, 0.8 mi (1.3 km) west of Niles, and at mile 21.6 (34.8 km).

DRAINAGE AREA.--6,770 mi² (17,530 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1897 to November 1903, October 1917 to current year. Published as "near Bennington" October 1917 to May 1919. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 806: Drainage area. WSP 926: 1935. WSP 1310: 1897-1903. WSP 1440: 1903, 1919, 1927.

GAGE.--Water-stage recorder. Datum of gage is 1,160.97 ft (353.864 m) above mean sea level. Prior to Nov. 30, 1903, nonrecording gage at present site and at different datum. Oct. 1, 1917, to May 31, 1919, nonrecording gage near Bennington, 27 mi (43 km) upstream at different datum. June 1, 1919, to Sept. 30, 1922, nonrecording gage at present site at datum 2.00 ft (0.610 m) higher. Oct. 1, 1922, to Apr. 25, 1934, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated since 1968 by Waconda Lake 150.8 mi (242.6 km) upstream (see sta 06874200). Slight regulation by Kirwin Reservoir since 1955 (see sta 06871700) and by Webster Reservoir since 1956 (see sta 06873100). Many small diversions above station for irrigation.

AVERAGE DISCHARGE.--66 years, 563 ft³/s (15.94 m³/s), 407,900 acre-ft/yr (502 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 178,000 ft³/s (5,040 m³/s) July 14, 1951, gage height, 31.76 ft (9.680 m); minimum observed, 1 ft³/s (0.03 m³/s) Sept. 4, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,740 ft³/s (106 m³/s) June 2, gage height, 19.69 ft (6.002 m); minimum, 26 ft³/s (0.74 m³/s) Oct. 13, result of temporary construction dam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	73	62	60	90	82	108	78	2590	123	59	533
2	64	74	64	60	90	81	112	77	3170	497	59	1130
3	67	73	65	60	90	83	95	93	1570	534	68	653
4	70	71	67	60	90	85	92	129	577	146	70	457
5	1450	70	68	60	94	85	94	100	312	97	76	1630
6	2630	68	71	60	95	83	93	86	203	84	343	1890
7	1830	68	58	60	96	82	89	81	158	74	521	973
8	1430	70	62	60	96	82	88	80	129	67	635	404
9	766	71	66	50	93	78	88	75	115	62	416	270
10	258	69	75	50	95	88	83	70	106	58	210	206
11	173	67	58	50	99	83	81	70	99	64	123	164
12	130	66	63	60	109	86	88	65	93	61	90	147
13	79	67	70	70	113	88	72	54	108	57	76	139
14	73	66	71	70	124	88	74	60	995	52	72	141
15	80	66	69	60	164	113	74	63	820	70	67	188
16	78	67	70	60	127	105	78	64	500	73	65	145
17	76	68	74	60	120	88	83	69	268	61	78	125
18	84	71	73	60	119	81	92	74	151	52	374	117
19	74	73	75	60	101	78	98	81	194	46	1110	111
20	68	73	72	70	100	76	103	87	342	43	817	102
21	67	73	58	70	99	74	122	186	249	46	420	98
22	67	72	62	70	101	73	130	422	988	44	238	91
23	67	70	76	70	99	72	136	388	2830	51	149	92
24	67	71	74	70	97	72	118	256	2050	42	122	92
25	67	70	74	70	97	73	103	161	1010	46	563	91
26	67	70	69	70	90	74	97	110	549	43	1130	89
27	72	70	73	70	85	74	90	89	305	38	865	88
28	73	60	74	60	83	81	83	91	241	34	1620	89
29	73	60	71	60	---	90	78	557	213	73	2550	95
30	75	65	60	70	---	99	78	2710	154	62	2550	96
31	74	---	50	80	---	97	---	3410	---	54	1030	---
TOTAL	10314	2072	2094	1960	2856	2594	2820	9936	21089	2854	16566	10446
MEAN	333	69.1	67.5	63.2	102	83.7	94.0	321	703	92.1	534	348
MAX	2630	74	76	80	164	113	136	3410	3170	534	2550	1890
MIN	64	60	50	50	83	72	72	54	93	34	59	88
AC-FT	20460	4110	4150	3890	5660	5150	5590	19710	41830	5660	32860	20720

CAL YR 1976 TOTAL 70141 MEAN 192 MAX 2630 MIN 34 AC-FT 139100
WTR YR 1977 TOTAL 85601 MEAN 235 MAX 3410 MIN 34 AC-FT 169800

06876900 SOLOMON RIVER AT NILES, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1961 to current year.
CHLORIDE: October 1976 to current year.
WATER TEMPERATURES: October 1961 to current year.

COOPERATION.--Chemical data were furnished by Kansas Department of Health and Environment, samples were collected and analyses reviewed by U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,260 micromhos Jan. 8, 1968; minimum, 137 micromhos Aug. 22, 1966.
CHLORIDE: Maximum, 550 mg/l Aug. 21, 1976; minimum, 6.0 mg/l June 24, 1976.
WATER TEMPERATURES: Maximum, 32.0°C July 5, 1966; minimum, 0.0°C on several days during winter periods.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--Chlorides of 620 mg/l Jan. 20, 1971 and 5.0 mg/l June 29, 1965 were observed.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,820 micromhos Jan. 19; minimum daily, 220 micromhos Aug. 29.
CHLORIDE: Maximum daily, 540 mg/l July 18; minimum daily, 11 mg/l Sept. 6.
WATER TEMPERATURES: Maximum daily, 28.0°C June 11; minimum daily, 0.0°C on several days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
OCT												
21...	66	1730	7.7	8.0	40	350	92	100	21	231	5.5	12
DEC												
15...	56	2220	8.0	1.0	7	420	50	120	33	320	6.7	10
JAN												
13...	66	2660	7.6	.0	6	520	60	140	40	380	7.3	12
FEB												
10...	95	2230	7.7	.5	9	420	130	120	31	310	6.5	12
MAR												
08...	80	1980	7.8	9.0	20	390	98	110	29	290	6.4	10
APR												
25...	103	1950	--	16.0	--	350	88	91	29	320	7.5	16
MAY												
31...	3480	1100	7.1	20.0	--	--	--	--	--	24	--	7.0
JUL												
14...	50	1340	--	26.0	--	280	19	83	18	180	4.7	14

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT												
21...	310	0	250	170	290	.3	16	1000	1.36	179	.66	.20
DEC												
15...	370	0	310	240	390	--	13	1310	1.78	198	2.3	.09
JAN												
13...	460	0	380	300	490	--	17	1600	2.18	285	.34	.07
FEB												
10...	360	0	290	240	380	.2	12	1280	1.74	328	.29	.03
MAR												
08...	350	0	287	240	350	.3	8.5	1210	1.65	263	.10	.15
APR												
25...	320	0	262	220	380	.4	11	1230	1.67	342	1.3	.32
MAY												
31...	--	0	--	35	180	.1	10	--	--	--	.60	--
JUL												
14...	320	0	262	130	220	2.0	16	821	1.12	--	.00	.31

06876900 SOLOMON RIVER AT NILES, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2240	2320	2430	2600	2120	1820	2280	2140	291	864	2200	441
2	2260	2320	2430	2560	2130	1820	2240	2260	279	836	2500	379
3	2220	2310	2370	2630	2120	1900	2220	2290	297	326	1940	316
4	2210	2320	2350	2440	2070	1940	1980	2210	450	466	1680	400
5	1940	2350	2180	2280	2000	1970	1880	2150	712	641	1690	448
6	282	2350	2350	2220	1970	1980	1920	1930	978	899	969	308
7	319	2320	2410	2220	1990	2010	2100	1910	989	991	717	318
8	371	2280	2410	2250	1990	2040	2060	2000	1030	1040	624	374
9	430	2350	2500	2320	2070	2090	2120	2050	1050	1060	470	453
10	489	2380	2550	2390	2160	2110	2330	2020	1090	1120	692	549
11	652	2340	2460	2570	2120	2100	2380	2110	1260	1180	908	629
12	875	2320	2450	2690	1990	2010	2250	2190	1260	1260	1180	694
13	1060	2370	2400	2690	1950	1950	2140	2210	1380	1290	1000	759
14	1190	2340	2410	2690	1870	2100	2150	2150	1000	1390	1060	834
15	1070	2350	2330	2490	1850	2100	2170	2160	302	1500	1190	974
16	1100	2370	2270	2600	1900	2330	2130	2220	370	1780	1310	866
17	1230	2410	2220	2720	1890	2270	2080	2120	418	2320	1230	1010
18	1400	2400	2300	2710	1880	2250	2080	2190	965	2640	1470	1100
19	1500	2290	2300	2820	1940	2320	2110	2070	631	2280	744	1220
20	1630	2260	2250	2680	1940	2400	2050	2150	518	2360	616	1140
21	1710	2260	2330	2560	1900	2000	1750	871	312	2330	418	1200
22	1890	2320	2420	2510	1860	2100	1880	919	258	1890	608	1300
23	1970	2300	2380	2420	1810	2070	2200	892	290	1680	568	1350
24	2120	2340	2300	2320	1810	2080	2000	1110	236	1700	548	1460
25	2220	2350	2260	2270	1790	2170	2060	1030	414	1690	598	1530
26	2180	2350	2140	2240	1800	2200	2160	1010	414	1760	495	1590
27	2210	2320	2230	2220	1790	2260	2060	1270	503	1860	434	1670
28	2180	2480	2140	2130	1850	2140	2170	1430	489	1840	275	1780
29	2260	2460	2190	2120	---	2120	2220	810	812	2040	220	1760
30	2290	2460	2240	2080	---	1920	2170	403	736	2340	236	1710
31	2280	---	2370	2130	---	2020	---	245	---	2280	458	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	8.0	2.0	0.0	0.0	3.0	10.0	18.0	19.0	25.0	23.0	23.0
2	16.0	9.0	3.0	0.0	0.0	4.0	11.0	19.0	18.0	23.0	23.0	23.0
3	17.0	10.0	3.0	1.0	1.0	4.0	10.0	19.0	21.0	25.0	26.0	24.0
4	18.0	7.0	1.0	1.0	1.0	3.0	11.0	20.0	22.0	26.0	23.0	23.0
5	15.0	6.0	1.0	0.0	1.0	3.0	6.0	20.0	24.0	25.0	26.0	22.0
6	12.0	5.0	0.0	0.0	0.0	4.0	10.0	21.0	24.0	26.0	25.0	23.0
7	11.0	5.0	0.0	0.0	0.0	5.0	13.0	22.0	23.0	27.0	23.0	23.0
8	11.0	6.0	0.0	0.0	0.0	7.0	15.0	21.0	23.0	24.0	26.0	24.0
9	11.0	6.0	1.0	0.0	0.0	9.0	16.0	21.0	24.0	25.0	26.0	23.0
10	12.0	5.0	1.0	0.0	1.0	10.0	15.0	19.0	25.0	25.0	26.0	21.0
11	13.0	5.0	1.0	0.0	0.0	12.0	14.0	19.0	28.0	25.0	23.0	21.0
12	14.0	3.0	2.0	1.0	1.0	11.0	16.0	19.0	25.0	26.0	22.0	22.0
13	14.0	0.0	1.0	1.0	0.0	8.0	16.0	20.0	24.0	26.0	23.0	22.0
14	14.0	6.0	3.0	0.0	1.0	10.0	16.0	20.0	23.0	25.0	25.0	19.0
15	13.0	1.0	2.0	0.0	0.0	11.0	17.0	21.0	18.0	26.0	24.0	18.0
16	12.0	6.0	2.0	0.0	0.0	10.0	16.0	21.0	22.0	26.0	26.0	18.0
17	10.0	3.0	1.0	0.0	1.0	10.0	16.0	21.0	23.0	27.0	22.0	21.0
18	8.0	4.0	1.0	0.0	1.0	10.0	16.0	21.0	24.0	26.0	23.0	21.0
19	10.0	5.0	1.0	0.0	3.0	10.0	16.0	22.0	23.0	26.0	22.0	19.0
20	6.0	6.0	0.0	0.0	3.0	8.0	17.0	20.0	25.0	25.0	22.0	19.0
21	6.0	6.0	0.0	0.0	3.0	8.0	15.0	19.0	23.0	27.0	23.0	22.0
22	7.0	3.0	1.0	0.0	6.0	7.0	15.0	17.0	21.0	25.0	23.0	25.0
23	9.0	3.0	1.0	0.0	7.0	8.0	14.0	18.0	21.0	26.0	22.0	24.0
24	9.0	3.0	1.0	0.0	4.0	10.0	16.0	19.0	21.0	26.5	21.0	22.0
25	10.0	3.0	0.0	0.0	5.0	11.0	15.0	23.0	23.0	27.0	23.0	25.0
26	7.0	4.0	0.0	2.0	5.0	13.0	15.0	23.0	23.0	25.0	23.0	21.0
27	6.0	3.0	0.0	0.0	3.0	13.0	15.0	22.0	25.0	23.0	23.0	22.0
28	6.0	3.0	0.0	0.0	4.0	15.0	20.0	22.0	27.0	24.0	21.0	18.0
29	7.0	2.0	0.0	0.0	---	11.0	17.0	24.0	24.0	25.0	20.0	20.0
30	7.0	1.0	0.0	0.0	---	10.0	18.0	21.0	24.0	26.0	21.0	21.0
31	7.0	---	0.0	0.0	---	8.0	---	18.0	---	26.0	22.0	---

06876900 SOLOMON RIVER AT NILES, KS--Continued

DISSOLVED CHLORIDE (CL), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	430	420	440	470	360	310	420	390	28	110	420	47
2	410	420	440	470	360	310	420	420	26	100	500	28
3	440	420	440	480	360	320	410	420	24	26	340	30
4	410	420	420	440	360	330	360	440	50	48	270	38
5	350	450	420	400	330	340	340	420	98	67	200	34
6	40	440	420	360	330	340	340	350	150	110	97	11
7	50	420	460	390	340	350	390	350	130	130	160	16
8	70	440	460	400	340	380	370	360	140	140	82	25
9	50	420	460	420	360	370	390	380	140	140	44	30
10	50	440	400	430	380	360	440	370	140	150	96	51
11	80	430	440	440	370	360	480	390	180	160	140	62
12	130	420	440	490	360	350	430	410	190	180	200	75
13	170	420	430	490	350	340	480	410	230	200	140	84
14	200	420	440	480	330	380	400	390	30	220	150	97
15	160	440	420	460	330	380	400	410	170	240	180	130
16	180	400	410	480	340	440	390	420	30	320	200	96
17	200	440	400	500	330	420	390	400	32	460	180	130
18	240	440	420	500	340	420	380	400	140	540	240	160
19	250	420	470	520	360	430	400	380	55	440	96	180
20	280	410	410	480	350	460	380	400	46	450	73	160
21	300	410	430	450	340	360	300	130	24	440	30	180
22	340	420	440	440	320	380	320	140	12	330	78	190
23	360	420	420	420	320	390	420	140	22	270	65	200
24	400	420	420	400	310	380	360	180	14	280	59	240
25	420	430	400	400	310	400	380	160	28	270	70	250
26	420	420	400	380	310	400	400	160	30	290	50	260
27	420	430	400	380	310	410	380	190	48	320	36	280
28	400	450	390	360	310	390	410	230	44	310	19	310
29	420	460	390	360	---	400	420	120	100	380	16	300
30	420	460	410	370	---	340	400	56	88	430	17	300
31	420	---	430	360	---	380	---	23	---	420	57	---

06876900 SOLOMON RIVER AT NILES, KS--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT				
21...	1350	66	143	26
APR				
25...	1000	103	255	71
MAY				
31...	1320	3480	785	7380
JUN				
03...	1100	1600	724	3130
15...	1130	844	1450	3300
SEP				
13...	1100	141	300	114

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
OCT												
21...	1350	6	143	22	26	32	44	60	85	97	100	--
APR												
25...	1000	11	255	40	44	48	55	64	82	96	99	100

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS
(National stream-quality accounting network and pesticide station)

LOCATION.--Lat 38°54'24", long 97°07'12", in NW¼NW¼SE¼ sec.20, T.13 S., R.3 E., Dickinson County, Hydrologic Unit 10260008, at upstream side of bridge on State Highway 43 in Enterprise, 18.6 mi (29.9 km) upstream from Chapman Creek and at mile 43.3 (69.7 km).

DRAINAGE AREA.--19,260 mi² (49,880 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WSP 1390: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 1,103.25 ft (336.271 m) above mean sea level, datum of 1929. Nov. 1, 1934, to Jan. 28, 1935, nonrecording gage and Jan. 29, 1935, to May 3, 1959, water-stage recorder at site 0.2 mi (0.3 km) downstream at datum 5.40 ft (1.646 m) lower.

REMARKS.--Records good. Natural flow of stream affected by six lakes and reservoirs, and by numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years, 1,613 ft³/s (45.68 m³/s), 1,169,000 acre-ft/yr (1.44 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 233,000 ft³/s (6,600 m³/s) July 14, 1951, gage height, 33.96 ft (10.351 m), site and datum then in use, or 29.0 ft (8.84 m), present site and datum, from rating curve extended above 55,000 ft³/s (1,560 m³/s) on basis of slope-area measurement of peak flow; minimum, about 10 ft³/s (0.28 m³/s) Apr. 23, 1935, regulated by powerplant then in operation.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1903 reached a stage of about 27 ft (8.2 m), present site and datum, from information by Corps of Engineers, discharge, 90,000 ft³/s (2,500 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 31	0700	*13,400	379	17.34	5.285	July 3	1900	4,240	120	8.15	2.484
June 18	1900	4,600	130	8.55	2.606	Aug. 30	1300	9,010	255	13.31	4.057
June 24	0200	5,980	169	10.09	3.075	Sept. 3	0500	10,700	303	14.96	4.560

Minimum discharge, 72 ft³/s (2.04 m³/s) Dec. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	242	198	169	217	263	319	274	9550	710	221	6060
2	253	225	193	183	214	263	310	274	9280	620	306	9900
3	382	214	195	179	211	278	317	270	9340	2870	354	10300
4	387	207	203	178	209	272	342	291	6790	2920	321	5670
5	312	203	208	172	212	268	338	322	3390	1120	283	2240
6	1790	200	222	176	220	271	340	308	2030	696	438	2800
7	3250	196	164	169	226	270	324	284	1600	555	1360	2740
8	2910	193	146	160	233	267	305	415	1430	512	2410	1760
9	2520	192	200	150	243	264	289	364	1220	713	1680	1260
10	1420	193	233	150	271	254	270	295	913	680	1460	1150
11	670	191	160	160	304	262	256	256	737	673	925	1090
12	430	189	195	155	332	275	243	239	547	663	665	1030
13	342	188	212	152	337	276	251	230	518	645	678	1210
14	289	189	219	150	344	279	251	219	1110	628	687	1360
15	224	189	220	154	330	276	239	206	3290	616	672	2110
16	215	192	212	165	329	282	240	227	1720	609	759	1750
17	209	196	221	163	304	304	268	396	1510	656	729	1020
18	202	203	220	154	303	286	294	1070	3570	528	690	712
19	196	206	222	160	308	266	312	811	2290	341	982	600
20	198	209	208	156	303	248	331	466	1360	289	1570	541
21	193	209	151	164	294	242	380	1190	2590	235	1290	501
22	188	205	157	171	297	237	462	1950	5110	220	954	466
23	188	205	196	175	301	232	478	2570	5300	205	964	443
24	190	203	211	178	294	229	427	1520	5780	207	880	428
25	186	206	220	186	284	225	377	899	4390	276	1380	419
26	188	206	201	194	285	230	346	597	3440	237	2160	404
27	221	203	213	203	276	232	321	421	2420	213	3620	396
28	233	163	212	205	270	265	303	371	1390	206	5830	390
29	256	163	204	200	---	299	283	839	1180	211	7750	411
30	259	177	156	214	---	372	281	5550	913	214	8790	525
31	250	---	113	216	---	348	---	12600	---	237	7180	---
TOTAL	18735	5957	6085	5361	7751	8335	9497	35724	94708	19505	57988	59686
MEAN	604	199	196	173	277	269	317	1152	3157	629	1871	1990
MAX	3250	242	233	216	344	372	478	12600	9550	2920	8790	10300
MIN	184	163	113	150	209	225	239	206	518	205	221	390
AC-FT	37160	11820	12070	10630	15370	16530	18840	70860	187900	38690	115000	118400

CAL YR 1976 TOTAL 248740 MEAN 680 MAX 8630 MIN 113 AC-FT 493400
WTR YR 1977 TOTAL 329332 MEAN 902 MAX 12600 MIN 113 AC-FT 653200

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued
(National stream-quality accounting network and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1958, October 1961 to current year.
CHLORIDE: October 1976 to current year.
WATER TEMPERATURES: October 1965 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1957 to September 1975.

REMARKS.--Additional chemcial analyses by Kansas Department of Health and Environment are available in files of district office.

COOPERATION.--Pesticide data were furnished by Environmental Protection Agency, samples were collected and analyses reviewed by U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 5,340 micromhos Jan. 24, 1957; minimum, 56 micromhos May 30, 1977.
CHLORIDE: Maximum, 990 mg/l Sept. 4, 1976, minimum, 14 mg/l June 1, 1977.
WATER TEMPERATURES: Maximum, 33.0°C on several days during summer periods; minimum, 0.0°C on several days during winter periods.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--Chlorides of 1,320 mg/l on Jan. 22-24, 1957 were observed.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,340 micromhos, Dec. 1; minimum daily, 56 micromhos, May 30.
CHLORIDE: Maximum daily, 870 mg/l Oct. 2; minimum daily, 14 mg/l June 1.
WATER TEMPERATURES: Maximum daily, 26.0°C Sept. 22, 25; minimum daily, 0.0°C Jan 10-12.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
OCT												
12...	426	680	7.4	16.0	150	180	72	59	8.9	60	1.9	9.0
NOV												
10...	194	3000	7.8	6.5	10	580	300	170	38	430	7.8	11
DEC												
14...	240	2860	7.7	1.5	3	590	270,	170	39	600	7.2	9.0
JAN												
17...	165	1310	7.4	.0	5	620	290	180	42	610	7.2	8.9
FEB												
07...	240	2160	7.4	1.0	3	550	260	160	36	310	5.8	8.5
MAR												
07...	274	2340	7.8	6.0	5	480	250	140	32	300	6.0	7.8
APR												
11...	258	2230	7.8	16.0	15	450	230	130	30	290	6.0	9.3
MAY												
09...	372	1390	7.5	20.0	40	300	160	87	20	160	4.0	8.1
JUN												
16...	1580	695	7.4	25.5	190	180	69	52	11	68	2.2	9.9
JUL												
12...	655	310	7.6	28.0	40	230	150	61	19	150	4.3	11
AUG												
10...	1540	590	7.5	28.5	1500	150	44	46	8.6	63	2.2	9.1
SEP												
06...	2970	450	7.4	25.0	1400	140	18	44	7.6	41	1.5	8.6

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT												
12...	137	0	91	81	.4	8.4	404	.55	465	1.7	1.6	.45
NOV												
10...	348	0	320	640	.4	12	1840	2.50	964	.62	.39	.31
DEC												
14...	381	0	380	570	.4	12	1810	2.46	1170	.68	1.0	.32
JAN												
17...	409	0	380	590	.4	14	1890	2.57	842	.89	1.4	.02
FEB												
07...	353	0	340	430	.4	10	1530	2.08	991	.83	.82	.30
MAR												
07...	284	0	290	410	.4	5.6	1380	1.88	1020	.22	.33	.18
APR												
11...	270	0	260	400	.4	5.1	1300	1.77	906	.13	1.6	.35
MAY												
09...	170	0	200	270	.4	5.7	794	1.08	797	.57	2.2	.37
JUN												
16...	130	0	88	87	.3	9.0	411	.56	1750	.75	3.2	.81
JUL												
12...	93	0	180	220	.3	9.0	695	.95	1230	.55	.61	.02
AUG												
10...	130	0	76	82	.4	9.0	365	.50	1520	1.3	3.7	1.5
SEP												
06...	150	0	53	44	.4	12	284	.39	2200	1.1	3.3	1.0

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued
(National stream-quality accounting network and pesticide station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	CHLOR-A PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)
OCT								
12...	9.6	2100	670	13	390	1.13	.444	7012
NOV								
10...	12.1	700	85	--	26000	--	--	--
DEC								
14...	13.6	3100	7600	--	1700	--	--	--
JAN								
17...	15.0	7800	3300	--	2800	--	--	--
FEB								
07...	14.5	6200	3000	--	--	--	--	--
07...	--	--	--	4.0	6800	--	--	--
MAR								
07...	13.0	4000	800	--	240000	--	--	--
APR								
11...	10.2	2800	210	--	--	--	--	--
MAY								
09...	6.9	10000	12000	8.1	65000	--	--	--
JUN								
16...	7.0	4200	4000	--	5000	--	--	--
JUL								
12...	7.3	720	1000	--	--	--	--	--
AUG								
10...	6.3	3900	6000	45	--	--	--	--
SEP								
06...	7.1	3100	4000	--	--	--	--	--

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
OCT										
12...	10	8	2	<10	<8	2	20	20	0	<50
FEB										
07...	--	--	0	<10	<9	1	0	0	0	<50
MAY										
09...	3	--	3	10	6	4	0	0	0	<50
AUG										
10...	--	--	2	<10	<8	2	30	30	0	<50

DATE	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)
OCT										
12...	<50	0	20	15	5	15000	110	100	97	3
FEB										
07...	<50	0	10	8	2	400	20	100	98	2
MAY										
09...	<50	0	<10	<8	2	1700	20	<100	<89	11
AUG										
10...	<50	0	50	42	8	21000	80	<100	<100	0

DATE	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PEN ED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT										
12...	0	280	280	.0	1	0	1	60	50	10
FEB										
07...	110	140	30	.2	3	0	3	30	20	10
MAY										
09...	50	250	200	.0	1	0	1	20	0	20
AUG										
10...	4	1500	1500	.0	--	--	1	140	130	9

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued
(National stream-quality accounting network and pesticide station)

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALDRIN (UG/L)	TOTAL ATRA-ZINE (UG/L)	TOTAL CHLOR-DANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DI-AZINON (UG/L)	TOTAL DI-ELDRIN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL ETHION (UG/L)	TOTAL HEPTA-CHLOR (UG/L)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)
NOV 10...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 09...	ND	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 10...	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	TOTAL LINDANE (UG/L)	TOTAL MALA-THION (UG/L)	TOTAL METH-OXY-CHLOR (UG/L)	TOTAL METHYL PARA-THION (UG/L)	TOTAL METHYL TRI-THION (UG/L)	TOTAL PARA-THION (UG/L)	TOTAL SILVEX (UG/L)	SIMA-ZINE TOTAL((UG/L)	TOTAL TOX-APHENE (UG/L)	TOTAL TRI-THION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)
NOV 10...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 09...	ND	.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 10...	ND	ND	ND	ND	ND	ND	--	--	ND	ND	--	--

ND Not detected; detection limit is 0.01 UG/L.

DATE	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	ATRA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG)	DDD IN BOTTOM MA-TERIAL (UG/KG)	DDE IN BOTTOM MA-TERIAL (UG/KG)	DDT IN BOTTOM MA-TERIAL (UG/KG)	DI-AZINON IN BOTTOM MA-TERIAL (UG/KG)	DI-ELDRIN IN BOTTOM MA-TERIAL (UG/KG)	ENDRIN IN BOTTOM MA-TERIAL (UG/KG)	ETHION IN BOTTOM MA-TERIAL (UG/KG)	HEPTA-CHLOR IN BOTTOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE IN BOT-TOM MA-TERIAL (UG/KG)
NOV 10...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	LINDANE IN BOTTOM MA-TERIAL (UG/KG)	MALA-THION IN BOTTOM MA-TERIAL (UG/KG)	METHOX-YCHLOR IN BOT-TOM MA-TERIAL (UG/KG)	METHYL PARA-THION IN BOT-TOM MA-TERIAL (UG/KG)	METHYL TRI-THION IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION IN BOTTOM MA-TERIAL (UG/KG)	SILVEX IN BOTTOM MA-TERIAL (UG/KG)	SIMA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	TOX-APHENE IN BOTTOM MA-TERIAL (UG/KG)	TRI-THION IN BOTTOM MA-TERIAL (UG/KG)	2,4-D IN BOTTOM MA-TERIAL (UG/KG)	2,4,5-T IN BOTTOM MA-TERIAL (UG/KG)
NOV 10...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Not detected; detection limit is 0.10 UG/KG.

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued
(National stream-quality accounting network and pesticide station)

PHYTOPLANKTON ANALYSES (OCT.1976 - JUL.1977)

DATE	OCT 12.76		NOV 10.76		DEC 14.76		JAN 17.77		FEB 7.77	
TIME	1130		1210		1030		1215		1200	
TOTAL CELLS/ML	390		26000		1700		2800		6800	
DIVERSITY: DIVISION	0.0		1.2		1.5		1.3		0.9	
.CLASS	0.0		1.2		1.5		1.3		0.9	
..ORDER	1.0		1.4		2.3		1.5		0.9	
...FAMILY	1.0		1.7		2.8		1.6		1.6	
....GENUS	1.0		1.8		3.1		2.3		1.7	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	--	-	--	-
...CHLOROCOCCACEAE										
....CHLOROCOCCUM	--	-	--	-	--	-	40	1	--	-
...COELASTRACEAE										
....COELASTRUM	--	-	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	2200	9	260	15	40	1	96	1
....CHODATELLA	--	-	*	0	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	54	3	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	27	2	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	870	3	54	3	40	1	--	-
....SCENEDESMUS	--	-	870	3	--	-	--	-	--	-
....TETRASTRUM	--	-	--	-	54	3	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	--	-	--	-	--	-	--	-	*	0
....CHLAMYDOMONAS	--	-	1400	6	510#	29	690#	24	410	6
....CHLOROGONIUM	--	-	--	-	--	-	30	1	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....COSMARIUM	--	-	--	-	--	-	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..PENNALES										
...NAVICULACEAE										
....ENTOMONEIS	--	-	*	0	--	-	--	-	--	-
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	190#	50	--	-	27	2	--	-	*	0
....MELOSIRA	--	-	*	0	54	3	80	3	--	-
..PENNALES										
...ACHNANTHACEAE										
....COCCONEIS	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....SYNEDRA	--	-	*	0	--	-	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	*	0	40	2	80	3	160	2
...NAVICULACEAE										
....AMPHIPLEURA	--	-	--	-	--	-	--	-	*	0
....CALONEIS	--	-	--	-	--	-	--	-	--	-
....GYROSIGMA	*	0	--	-	--	-	--	-	--	-
....NAVICULA	--	-	330	1	160	9	--	-	260	4
...NITZSCHIACEAE										
....NITZSCHIA	190#	50	1100	4	170	10	50	2	120	2
...SURIRELLACEAE										
....SURIRELLA	--	-	*	0	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.MYXOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	18000#	70	270#	15	--	-	--	-
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	54	3	900#	32	1000#	15
....SPIRULINA	--	-	--	-	--	-	850#	30	--	-
...RIVULARIACEAE										
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-	4600#	68
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	440	2	--	-	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	*	0	--	-	--	-	*	0	55	1
....PHACUS	--	-	--	-	13	1	--	-	--	-
....TRACHELOMONAS	--	-	*	0	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued
(National stream-quality accounting network and pesticide station)

PHYTOPLANKTON ANALYSES (OCT.1976 - JUL.1977)

DATE	MAR 7,77		MAY 9,77		JUN 16,77		JUL 12,77	
TIME	1200		1130		1310		1130	
TOTAL CELLS/ML	240000		65000		5000		7600	
DIVERSITY: DIVISION	1.8		1.6		1.3		1.2	
.CLASS	1.8		1.6		1.3		1.2	
..ORDER	2.5		2.0		1.3		1.4	
...FAMILY	2.9		2.5		1.8		1.9	
....GENUS	3.1		3.1		1.8		2.3	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	120	2
...CHLOROCOCCACEAE								
....CHLOROCOCCUM	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	2100	3	--	-	74	1
...OOCYSTACEAE								
....ANKISTRODESMUS	14000	6	1500	2	--	-	44	1
....CHODATELLA	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	2400	4	--	-	100	1
....KIRCHNERIELLA	*	0	2400	4	--	-	100	1
....OOCYSTIS	--	-	2400	4	--	-	*	0
....TREUBARIA	--	-	--	-	--	-	780	10
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	120	2
....CRUCIGENIA	--	-	1200	2	--	-	120	2
....SCENEDESMUS	--	-	1800	3	3100#	63	440	6
....TETRASTRUM	--	-	9700	15	--	-	300	4
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	4600	2	--	-	--	-	--	-
....CHLAMYDOMONAS	31000	13	*	0	--	-	44	1
....CHLOROGONIUM	--	-	--	-	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	210	3
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..PENNALES								
...NAVICULACEAE								
....ENTOMONEIS	--	-	*	0	--	-	--	-
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	4600	2	21000#	32	*	0	--	-
....MELOSIRA	--	-	1200	2	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....COCCONEIS	--	-	--	-	160	3	*	0
...FRAGILARIACEAE								
....SYNEDRA	--	-	--	-	--	-	100	1
...GOMPHONEMATACEAE								
....GOMPHONEMA	*	0	--	-	--	-	--	-
...NAVICULACEAE								
....AMPHIPLEURA	--	-	--	-	--	-	--	-
....CALONEIS	*	0	--	-	--	-	--	-
....GYROSIGMA	--	-	--	-	--	-	--	-
....NAVICULA	35000	15	--	-	470	9	190	3
...NITZSCHIACEAE								
....NITZSCHIA	3500	1	610	1	630	13	--	-
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	160	3	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.MYXOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	4700#	63
....ANACYSTIS	35000	15	12000#	19	--	-	--	-
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	64000#	27	4900	7	--	-	--	-
....SPIRULINA	--	-	--	-	--	-	--	-
...RIVULARIACEAE								
....RAPHIDIOPSIS	17000	7	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOMONODACEAE								
....CRYPTOMONAS	2300	1	--	-	--	-	--	-
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	9300	4	*	0	--	-	--	-
....PHACUS	*	0	--	-	160	3	*	0
....TRACHELOMONAS	15000	6	*	0	310	6	44	1
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued
(National stream-quality accounting network and pesticide station)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3040	2420	3340	2720	2490	2270	1900	2310	316	973	2540	400
2	2990	2400	3150	3180	2410	2280	1940	2330	343	1130	2510	350
3	2780	2550	2910	3130	2410	2280	2100	2390	451	634	2200	345
4	1810	2710	2930	2880	2420	2340	2080	2350	452	501	1840	372
5	1770	2770	2930	2820	2420	2340	2110	2310	658	564	1820	447
6	1300	2850	2870	2920	2430	2260	2100	2210	848	759	1380	440
7	682	2850	2780	2910	2430	2290	1950	2140	997	950	1380	401
8	504	2940	2710	2870	2410	2290	1920	2230	1070	1140	457	524
9	417	2990	2800	2900	2270	2340	2000	1610	1120	1320	765	680
10	495	3020	3110	2920	2300	2350	2120	1910	1140	1340	648	912
11	573	3050	2820	2940	2210	2320	2200	1860	1240	1340	629	908
12	682	3020	2730	2950	2110	2460	2300	2120	1250	1350	730	910
13	820	3070	2890	2970	1990	2450	2410	2320	1300	1370	958	842
14	1010	3070	2970	3000	1860	2290	2480	2450	1370	1400	1160	976
15	1310	3080	2870	3020	1930	2300	2420	2500	395	1420	1180	678
16	1480	3050	2730	3120	1940	2280	2450	2650	790	1440	1210	774
17	1810	3070	2750	3020	1990	2280	2470	2630	593	1500	1200	769
18	1880	3040	2740	3070	2120	2260	2400	1610	387	1400	1200	1010
19	1960	2980	2740	2970	2240	2380	2270	740	586	2490	1260	1190
20	2100	2900	2690	3020	2150	2480	2120	1220	836	2490	659	1320
21	2230	2900	2650	2940	2100	2560	2010	1270	606	2500	667	1430
22	2290	2850	2650	2960	2220	2570	1910	926	412	2500	760	1560
23	2460	2850	2850	2850	2290	2580	1680	596	418	2700	795	1620
24	2550	2820	3150	2840	2260	2580	1420	692	380	2640	994	1700
25	2700	2850	2880	2750	2250	2500	1650	719	646	2920	626	1760
26	2720	2870	2750	2730	2220	2570	1830	831	649	2510	771	1790
27	2740	2880	2710	2670	2210	1860	1860	989	509	2210	514	1860
28	2730	2880	2740	2630	2240	2500	2000	1110	560	2450	394	1930
29	2690	2880	2690	2540	---	2510	2170	1050	630	2360	343	1970
30	2390	3050	2720	2490	---	2470	2240	156	1030	2550	345	1970
31	2350	---	2780	2400	---	1850	---	340	---	2540	371	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	15.0	8.0	2.5	8.0	13.0	7.0	22.0	20.0	22.0	21.0	22.0
2	20.0	5.0	9.0	2.5	4.0	12.0	12.5	20.0	20.0	21.0	19.0	21.0
3	22.0	5.0	5.0	1.5	6.0	13.0	7.0	21.0	22.0	23.0	18.0	23.0
4	20.0	5.0	5.0	5.0	7.0	9.0	5.0	22.0	21.0	21.0	20.0	19.0
5	20.0	12.0	4.0	3.5	8.0	15.0	6.0	21.0	22.0	22.0	22.0	21.0
6	19.0	16.0	8.0	5.0	9.0	13.0	8.0	22.0	22.0	21.0	22.0	23.0
7	25.0	7.0	5.0	5.0	10.0	17.0	22.0	23.0	21.0	19.0	21.0	21.0
8	25.0	15.0	8.0	4.0	12.0	14.0	23.0	23.0	21.0	22.0	21.0	23.0
9	23.0	13.0	11.0	0.5	11.0	18.0	23.0	21.0	21.0	21.0	22.0	25.0
10	24.0	15.0	5.0	0.0	14.0	9.0	22.0	22.0	22.0	23.0	23.0	25.0
11	20.0	9.0	4.0	0.0	10.0	10.0	21.0	21.0	20.0	18.0	18.0	25.0
12	20.0	11.0	10.0	0.0	14.0	5.0	10.0	19.0	21.0	19.0	19.0	25.0
13	19.0	9.0	5.0	4.0	14.0	7.0	7.0	20.0	19.0	22.0	22.0	18.0
14	20.0	8.0	10.0	0.5	7.0	14.0	22.0	21.0	20.0	21.0	18.0	21.0
15	19.0	10.0	10.0	0.5	5.0	10.0	10.0	22.0	19.0	21.0	21.0	20.0
16	17.0	11.0	10.0	0.5	10.0	7.0	13.0	20.0	22.0	23.0	19.0	22.0
17	15.0	9.0	11.0	4.0	13.0	5.0	21.0	21.0	19.0	22.0	21.0	23.5
18	15.0	10.0	12.0	1.0	9.0	21.0	15.0	19.0	18.0	21.0	22.0	25.0
19	12.0	12.0	5.0	8.0	9.0	7.0	22.0	18.0	20.0	22.0	18.0	25.0
20	15.0	10.0	5.0	5.0	13.0	15.0	20.0	20.0	19.0	23.0	25.0	19.0
21	18.0	10.0	5.0	8.0	5.0	13.0	8.0	18.0	20.0	22.0	25.5	23.0
22	15.0	10.0	10.0	9.0	13.0	18.0	21.0	19.0	22.0	21.0	19.0	26.0
23	18.0	10.0	19.0	8.0	5.0	20.0	22.0	19.0	19.0	21.0	22.0	25.0
24	15.0	12.0	8.0	9.0	14.0	5.0	21.0	20.0	22.0	23.0	24.0	23.0
25	15.0	8.5	2.5	10.0	14.0	7.0	22.0	19.0	22.0	18.0	25.0	26.0
26	15.0	7.0	9.0	10.0	12.0	10.0	23.0	18.0	21.0	21.0	26.0	22.0
27	12.0	5.0	11.0	5.0	12.0	10.0	24.0	19.0	23.0	22.0	22.0	23.0
28	12.0	5.0	2.5	5.0	10.0	10.0	20.0	20.0	19.0	21.0	21.0	19.0
29	10.0	3.0	18.0	6.0	---	10.0	22.0	18.0	21.0	21.0	22.0	21.0
30	12.0	5.0	17.0	7.0	---	13.0	20.0	19.0	22.0	22.0	21.0	22.0
31	5.0	---	2.5	6.0	---	25.0	---	21.0	---	19.0	22.0	---

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued
(National stream-quality accounting network and pesticide station)

DISSOLVED CHLORIDE (CL), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	700	460	700	520	440	430	320	440	14	130	540	29
2	870	460	640	660	420	430	340	450	20	160	540	19
3	430	520	560	640	420	440	390	460	38	61	460	20
4	340	540	580	560	430	450	370	460	40	32	340	22
5	320	580	580	540	430	440	390	450	77	48	340	33
6	220	600	560	560	440	470	380	430	120	89	250	29
7	80	600	540	560	440	440	350	400	140	130	250	25
8	60	620	580	550	440	430	330	410	160	170	100	67
9	40	640	540	580	400	450	360	300	160	180	42	75
10	50	640	640	580	420	450	400	350	170	270	73	120
11	50	650	540	590	400	460	410	340	190	200	76	120
12	90	640	520	580	380	570	440	420	180	220	96	120
13	110	640	560	580	360	480	460	460	180	230	150	100
14	150	650	580	580	340	440	500	520	210	240	200	120
15	220	650	570	580	340	400	400	520	100	240	200	80
16	280	640	520	600	360	440	490	580	28	250	180	94
17	360	650	480	580	360	440	490	580	61	270	190	93
18	370	640	540	580	400	430	460	310	26	240	190	140
19	390	610	540	560	420	460	420	96	55	560	200	180
20	420	600	520	560	420	500	380	180	100	540	87	200
21	470	580	510	560	380	570	340	180	66	540	85	220
22	490	580	490	560	420	530	320	130	28	550	110	260
23	490	580	560	530	440	530	220	64	27	590	100	260
24	540	560	660	520	430	550	270	76	27	590	160	280
25	570	580	570	500	420	520	270	78	72	600	76	310
26	580	580	560	500	420	520	320	100	72	510	100	320
27	570	580	520	480	420	300	330	130	43	460	52	340
28	560	580	540	480	420	500	360	160	47	520	25	340
29	530	560	520	460	---	490	400	150	61	500	19	360
30	460	610	530	440	---	460	420	41	140	550	18	360
31	460	---	540	420	---	310	---	18	---	540	27	---

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
OCT					
12...	1130	426	680	487	560
NOV					
10...	1230	194	--	26	14
APR					
11...	1140	258	--	107	75
MAY					
09...	1150	372	--	228	229
JUN					
01...	1410	8830	--	1860	44300
16...	1130	1580	--	1060	4520
JUL					
12...	1200	655	--	143	253
AUG					
10...	1100	1540	--	2200	9150
SEP					
06...	1305	2970	--	3250	26100

06877600 SMOKY HILL RIVER AT ENTERPRISE, KS--Continued
(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
OCT									
12...	1130	426	487	84	93	97	99	100	--
SEP									
06...	1305	2970	3250	63	76	88	98	99	10

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
NOV												
10...	1230	10	26	2	2	15	59	74	86	94	98	100
APR												
11...	1140	10	107	2	3	17	54	76	89	96	100	--

06878000 CHAPMAN CREEK NEAR CHAPMAN, KS

LOCATION.--Lat 39°01'52", long 97°02'24", in SW¼SE¼SE¼ sec.1, T.12 S., R.3 E., Dickinson County, Hydrologic Unit 10260008, on right bank at downstream side of bridge on State Highway 18, 5.0 mi (8.0 km) northwest of Chapman, and at mile 10.0 (16.1 km).

DRAINAGE AREA.--300 mi² (777 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,102.41 ft (336.015 m) above mean sea level (levels by Corps of Engineers). Prior to May 5, 1959, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--23 years (1954-77), 84.7 ft³/s (2.399 m³/s), 61,370 acre-ft/yr (75.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft³/s (447 m³/s) Oct. 12, 1973, gage height, 24.08 ft (7.340 m); minimum observed, 0.10 ft³/s (0.003 m³/s) Oct. 10, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1951 reached a stage of 25.5 ft (7.77 m), from floodmarks, discharge, 46,700 ft³/s (1,320 m³/s), from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 30	2300	4,010	114	21.13	6.440	June 25	0900	3,970	112	21.10	6.431
June 3	1200	1,600	45.3	16.81	5.124	Aug. 29	1700	3,460	98.0	20.68	6.303
June 18	1200	*11,000	312	23.36	7.120	Sept. 1	1800	1,570	44.5	16.71	5.093
June 23	1400	3,230	91.5	20.44	6.230						

Minimum discharge, 11 ft³/s (0.31 m³/s) Oct. 2-4, May 14-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	19	19	19	19	20	25	16	820	87	13	1020
2	11	19	19	19	18	20	22	24	363	78	13	584
3	11	19	19	19	19	22	20	28	1290	74	15	216
4	12	17	20	17	19	23	25	56	203	69	200	198
5	92	16	20	15	19	23	29	43	91	63	159	131
6	124	17	20	14	19	24	28	25	64	54	744	98
7	39	17	17	13	20	22	27	19	51	48	686	79
8	23	17	15	12	20	22	23	17	44	45	152	66
9	18	18	13	12	21	21	20	15	39	42	54	55
10	16	18	14	12	22	21	19	25	35	40	32	47
11	15	18	15	13	23	21	18	25	31	39	26	44
12	14	18	16	15	25	22	17	18	28	45	25	130
13	13	18	18	17	28	24	18	14	122	40	22	615
14	12	19	20	16	30	26	18	12	73	33	22	197
15	12	19	20	15	28	24	18	11	41	27	28	95
16	12	19	21	15	26	22	18	11	35	26	40	72
17	12	19	20	15	23	21	20	11	1180	22	106	61
18	13	20	20	16	23	20	22	11	7900	18	137	56
19	14	20	21	16	23	19	45	11	5060	17	63	50
20	14	20	19	17	23	19	27	175	1590	14	34	48
21	15	20	20	18	23	19	42	540	506	14	26	47
22	15	20	20	19	23	19	44	787	2290	15	43	44
23	16	20	20	20	25	19	31	233	2830	15	629	46
24	16	19	19	21	27	19	25	129	726	14	277	44
25	16	19	19	22	25	18	21	73	2680	14	129	41
26	17	20	19	22	23	18	18	39	289	14	216	40
27	18	21	20	21	23	18	17	28	162	14	240	38
28	18	20	20	20	21	23	15	23	130	13	2130	38
29	18	20	19	20	---	28	14	258	111	14	3340	43
30	20	19	18	21	---	31	15	1960	99	13	1750	42
31	20	---	18	20	---	32	---	3200	---	13	264	---
TOTAL	678	565	578	531	638	680	701	7837	28883	1034	11615	4285
MEAN	21.9	18.8	18.6	17.1	22.8	21.9	23.4	253	963	33.4	375	143
MAX	124	21	21	22	30	32	45	3200	7900	87	3340	1020
MIN	11	16	13	12	18	18	14	11	28	13	13	38
AC-FT	1340	1120	1150	1050	1270	1350	1390	15540	57290	2050	23040	8500

CAL YR 1976 TOTAL 23176.2 MEAN 63.3 MAX 2320 MIN 0.3 AC-FT 45970
WTR YR 1977 TOTAL 58025.0 MEAN 159 MAX 7900 MIN 11 AC-FT 115100

06879100 KANSAS RIVER AT FORT RILEY, KS

LOCATION.--Lat 39°03'09", long 96°46'33", in NE¼SW¼NW¼ sec.33, T.11 S., R.6 E., Geary County, Hydrologic Unit 10270101, at downstream side of military highway bridge 1.6 mi (2.6 km) below the confluence of Republican and Smoky Hill Rivers, and at mile 168.9 (271.8 km).

DRAINAGE AREA.--44,870 mi² (116,200 km²), of which a large area is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,034.69 ft (315.374 m) above mean sea level.

REMARKS.--Records good. Natural flow of stream affected by reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--13 years, 2,695 ft³/s (76.32 m³/s), 1,953,000 acre-ft/yr (2.41 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,400 ft³/s (1,680 m³/s) Oct. 14, 1973, gage height, 23.74 ft (7.236 m); minimum, 100 ft³/s (2.83 m³/s) Dec. 24, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1951 reached a stage of 34.5 ft (10.52 m), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 31	1600	18,500	524	14.54	4.432	Aug. 26	0100	7,430	210	10.09	3.075
June 18	1700	*22,900	649	16.03	4.886	Aug. 30	1500	15,800	447	13.56	4.133
June 25	2200	14,600	413	13.13	4.002	Sept. 3	2100	15,000	425	13.30	4.054
July 4	1400	6,260	177	9.46	2.883						

Minimum daily discharge, 250 ft³/s (7.08 m³/s) Jan. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	406	471	400	300	300	377	442	414	14100	5180	1470	11300
2	406	462	412	300	320	373	427	449	9790	3730	1460	13400
3	414	449	412	300	340	379	403	382	10600	3640	1340	14900
4	507	439	410	300	340	379	450	361	9830	5840	1290	13600
5	546	433	414	300	340	379	435	377	5750	5070	1330	8840
6	554	430	417	300	320	379	425	414	3560	3970	1260	7300
7	2200	426	366	300	320	379	427	416	2620	3600	2070	7640
8	3130	424	350	300	350	379	420	406	2210	3570	2810	7230
9	3020	421	399	250	376	379	402	452	1970	1940	3210	6370
10	2590	421	411	250	392	376	382	479	1710	1660	2550	4760
11	1550	419	366	300	415	377	369	415	1460	1620	2630	2940
12	915	418	403	300	456	371	357	379	1310	1490	2590	2660
13	653	419	402	300	442	377	352	358	1120	1420	2350	3070
14	540	418	438	300	429	385	352	345	1150	1340	2350	2570
15	474	416	429	300	434	386	355	336	1990	1400	2340	2260
16	426	415	411	300	432	388	365	325	3220	2720	2450	3420
17	409	422	388	300	424	385	379	339	3100	2750	2660	3870
18	414	450	417	300	411	395	383	391	17000	2780	3560	3250
19	452	456	421	350	401	395	398	1170	17400	2700	3580	2940
20	447	458	419	380	400	379	434	1100	9800	2520	3810	2790
21	446	458	366	350	402	367	462	1370	7560	2450	4310	2710
22	440	462	385	350	397	369	519	3080	13000	2390	4120	2630
23	434	461	400	370	394	358	565	3360	11300	2370	5300	2550
24	428	443	420	400	395	350	606	3170	11500	2360	5950	2500
25	424	410	433	400	392	345	562	2110	12400	2320	6040	2450
26	427	409	435	400	389	343	511	1500	11200	2370	6950	2410
27	457	412	420	400	386	343	467	1110	8470	2370	5490	2380
28	455	374	414	350	382	409	434	880	7170	2330	7170	2350
29	466	376	418	300	---	383	413	906	6360	2160	12200	2350
30	495	372	350	300	---	404	408	3340	6030	1530	15500	2360
31	487	---	300	300	---	436	---	15900	---	1480	13900	---
TOTAL	25012	12844	12426	9950	10779	11724	12904	46034	214680	83150	134120	149800
MEAN	807	428	401	321	385	378	430	1485	7156	2682	4326	4993
MAX	3130	471	438	400	456	436	606	15900	17400	5840	15500	14900
MIN	406	372	300	250	300	343	352	325	1120	1340	1260	2260
AC-FT	49610	25480	24650	19740	21380	23250	25600	91310	425800	164900	266000	297100

CAL YR 1976 TOTAL 506642 MEAN 1384 MAX 13000 MIN 300 AC-FT 1005000
WTR YR 1977 TOTAL 723423 MEAN 1982 MAX 17400 MIN 250 AC-FT 1435000

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS

LOCATION.--Lat 39°58'48", long 97°00'16", NE¼SW¼ sec.8, T.1 S., R.4 E., Washington County, Hydrologic Unit 10270207, on right bank and 2 ft (1 m) downstream from bridge on county road, 0.6 mi (1.0 km) west of Hollenberg, and 1.75 mi (2.82 km) downstream from Nebraska-Kansas State line.

DRAINAGE AREA.--2,752 mi^2 (7,128 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1973 to February 1974 (discharge measurements only), March 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,216.10 ft (370.667 m) above mean sea level.

REMARKS.--Records to be published in "Water Resources Data for Nebraska, water year 1977".

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,920 ft^3/s (281 m^3/s) June 24, 1975, gage height, 13.21 ft (4.026 m); minimum daily, 40 ft^3/s (1.13 m^3/s) Dec. 17, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1973, reached a stage of 23.07 ft (7.032 m), present datum, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Not available at time of publication.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

REMARKS.--Chemical analyses are not available at time of publication. Records to be published in "Water Resources Data for Nebraska, water year 1977".

06884200 MILL CREEK AT WASHINGTON, KS

LOCATION.--Lat 39°48'50", long 97°02'20", in SW¼SW¼SE¼ sec.1, T.3 S., R.3 E., Washington County, Hydrologic Unit 10270207, at downstream side of bridge on U.S. Highway 36, 0.5 mi (0.8 km) east of Washington, and about 26 mi (41.8 km) upstream from mouth.

DRAINAGE AREA.--344 mi² (891 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,261.56 ft (384.523 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are poor. Diversions above station for irrigation.

AVERAGE DISCHARGE.--18 years, 94.1 ft³/s (2.665 m³/s), 68,180 acre-ft/yr (84.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s (303 m³/s) June 16, 1967, gage height, 26.34 ft (8.028 m); maximum gage height, 27.17 ft (8.281 m) Sept. 26, 1973; no flow at times in 1963-66.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages known since at least 1903, about 36 ft (11.0 m) June 8, 1941, about 34 ft (10.4 m) in 1903 and 1908, from information by local residents and newspaper files.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	2100	* 2,680	75.9	16.55	5.044	Aug. 28	1100	1,960	55.5	13.75	4.191
Aug. 17	1700	1,300	36.8	10.46	3.188	Sept. 13	0400	1,300	36.8	10.46	3.188
Aug. 22	2400	1,840	52.1	13.16	4.011						

Minimum discharge, 0.02 ft³/s (0.001 m³/s) July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.8	3.4	2.6	6.6	7.0	15	5.1	109	13	3.6	31
2	.93	3.6	4.0	2.7	7.2	8.0	11	8.7	56	11	2.4	234
3	1.2	3.1	4.0	3.0	7.6	9.4	8.9	464	42	9.8	1.7	166
4	11	2.9	4.0	5.1	8.0	8.5	12	508	31	6.9	468	90
5	10	2.8	4.3	5.0	8.4	8.8	10	157	27	6.6	300	68
6	4.1	2.9	3.9	4.4	8.8	8.4	11	36	23	5.7	51	42
7	2.4	3.2	2.8	4.2	9.4	8.2	8.7	21	20	4.4	127	30
8	1.6	3.9	2.6	3.7	10	8.3	7.3	389	17	5.0	72	29
9	1.3	3.2	2.5	3.5	12	8.1	6.6	181	15	2.5	38	25
10	1.6	3.0	3.1	3.5	15	8.7	5.7	35	13	4.5	17	24
11	1.8	3.1	2.7	4.0	18	12	5.0	16	12	7.4	21	21
12	2.0	2.6	2.7	4.2	18	14	4.7	12	13	4.8	28	422
13	1.4	2.6	2.9	4.7	16	16	5.2	8.4	27	4.9	12	993
14	1.6	3.1	3.0	5.2	14	13	4.7	6.6	27	4.2	8.5	198
15	1.7	3.6	3.4	5.6	11	11	4.6	5.5	17	2.6	9.2	59
16	.92	3.9	3.5	5.8	8.9	9.4	5.4	5.2	13	3.0	1030	37
17	1.8	4.0	3.8	6.0	8.3	8.9	7.1	15	13	1.1	1200	30
18	2.9	4.5	3.9	6.4	8.2	7.3	8.9	14	53	.45	211	26
19	2.4	5.1	4.2	6.6	8.4	6.5	13	24	90	.20	44	23
20	2.6	4.4	4.0	7.0	8.3	6.3	12	269	36	.16	26	20
21	2.6	3.9	3.4	7.4	8.3	6.2	11	1810	66	.12	26	18
22	3.2	3.3	3.1	7.8	8.7	5.5	15	2150	422	.08	350	16
23	3.5	3.7	2.9	7.6	9.9	5.3	22	569	424	.07	1300	16
24	3.7	4.0	3.0	7.2	10	5.4	16	109	65	.05	1320	15
25	3.9	5.3	3.4	7.0	9.6	5.5	11	64	83	.04	175	16
26	3.8	4.4	3.7	6.6	9.2	5.8	8.8	45	392	.03	137	15
27	3.9	3.9	3.9	6.2	9.3	12	7.8	41	64	.14	110	14
28	4.0	3.2	4.3	6.0	7.7	96	6.6	43	32	6.0	1370	12
29	4.1	2.9	4.2	6.0	---	72	5.6	373	23	58	192	12
30	5.2	2.8	3.5	6.0	---	28	5.3	734	17	26	63	12
31	4.0	---	3.0	6.2	---	19	---	185	---	7.3	34	---
TOTAL	96.65	105.7	107.1	167.2	284.8	448.5	275.9	8303.5	2242	196.04	8747.4	2717
MEAN	3.12	3.52	3.45	5.39	10.2	14.5	9.20	268	74.7	6.32	282	90.6
MAX	11	5.3	4.3	7.8	18	96	22	2150	424	58	1370	993
MIN	.92	2.6	2.5	2.6	6.6	5.3	4.6	5.1	12	.03	1.7	12
AC-FT	192	210	212	332	565	890	547	16470	4450	389	17350	5390

CAL YR 1976 TOTAL 13064.65 MEAN 35.7 MAX 1990 MIN .00 AC-FT 25910
WTR YR 1977 TOTAL 23691.79 MEAN 64.9 MAX 2150 MIN .03 AC-FT 46990

06884400 LITTLE BLUE RIVER NEAR BARNES, KS

LOCATION.--Lat 39°46'33", long 96°51'29", in NW¼NW¼SW¼ sec.22, T.3 S., R.5 E., Washington County, Hydrologic Unit 10270207, on right bank at downstream side of bridge on State Highway 15 E., 0.4 mi (0.6 km) downstream from Malone Creek, 4.5 mi (7.2 km) north of Barnes, and at mile 19.2 (30.9 km).

DRAINAGE AREA.--3,324 mi² (8,609 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1958 to current year. Published as "at Waterville" April 1958 to September 1960; those prior to April 1958 collected at site 11.5 mi (18.5 km) downstream and are considered not equivalent.

REMARKS.--Records good except those for winter periods and period of no gage-height record July 28 to Aug. 25, which are poor.

GAGE.--Water-stage recorder. Datum of gage is 1,140.06 ft (347.490 m) above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--19 years, 637 ft³/s (18.04 m³/s), 461,500 acre-ft/yr (569 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,700 ft³/s (1,520 m³/s) Oct. 12, 1973, gage height, 27.7 ft (8.44 m), from floodmark; minimum, 22 ft³/s (0.62 m³/s) Aug. 6, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 22	1800	6,650	188	12.12	3.694	Aug. 17	1900	9,620	272	14.56	4.438
June 24	1000	7,140	202	12.53	3.819	Sept. 13	0200	*11,700	331	15.97	4.868
Aug. 5	1200	6,120	173	11.67	3.557						

Minimum daily discharge, 80 ft³/s (2.266 m³/s) Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262	119	110	82	140	159	215	195	682	440	300	646
2	203	118	120	86	150	160	200	191	671	361	275	635
3	164	115	130	88	160	176	186	735	601	407	250	1000
4	164	113	140	90	160	184	197	1210	504	787	1500	933
5	148	112	150	92	170	173	206	1110	432	419	5500	1040
6	136	112	160	92	180	163	195	575	368	321	4000	583
7	226	112	140	90	190	163	180	369	323	283	1800	447
8	254	112	120	88	200	160	186	296	292	274	950	374
9	204	114	130	86	210	162	178	481	265	293	650	354
10	171	114	120	86	220	163	163	773	246	312	450	313
11	149	116	110	86	230	170	153	479	237	276	400	285
12	134	116	110	86	240	192	149	383	243	297	400	5390
13	122	104	120	88	250	199	156	476	243	279	375	10800
14	112	100	130	90	260	199	157	400	859	256	400	7100
15	108	111	130	96	250	199	156	338	2130	250	500	3250
16	103	127	140	98	250	195	369	283	1520	233	2700	2320
17	101	129	150	94	260	177	314	263	927	225	8700	1730
18	100	133	160	92	270	165	252	254	598	245	7800	2490
19	100	133	160	94	280	160	262	252	1520	225	5600	2010
20	103	134	130	96	300	162	261	266	1440	210	3400	1140
21	104	133	90	100	308	166	225	2490	850	193	1800	805
22	104	126	84	110	276	163	235	6260	729	172	1800	629
23	106	120	88	120	252	161	234	4830	5180	156	3800	526
24	106	126	92	120	228	152	574	2070	6230	155	4000	469
25	106	126	96	130	207	147	487	1170	2800	166	2900	502
26	107	128	100	140	193	150	369	863	1730	171	1460	381
27	108	110	110	150	176	174	309	686	1430	185	1070	347
28	108	100	110	140	166	204	260	819	939	400	2830	319
29	108	90	100	130	---	354	271	1340	717	325	2600	306
30	114	100	90	130	---	364	203	1290	559	350	1250	291
31	118	---	80	130	---	264	---	1220	---	400	847	---
TOTAL	4253	3503	3700	3200	6176	5780	7252	32367	35265	9067	70107	47415
MEAN	137	117	119	103	221	186	242	1044	1176	292	2262	1581
MAX	262	134	160	150	308	364	574	6260	6230	787	8700	10800
MIN	100	90	80	82	140	147	149	191	237	156	250	285
AC-FT	8440	6950	7340	6350	12250	11460	14380	64200	69950	17980	139100	94050

CAL YR 1976 TOTAL 108765 MEAN 297 MAX 5360 MIN 43 AC-FT 215700
WTR YR 1977 TOTAL 228085 MEAN 625 MAX 10800 MIN 80 AC-FT 452400

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
FEB					
22...	1240	260	3300	290	204
APR					
22...	0850	232	660	286	179
MAY					
24...	1145	2020	187	2930	16000
JUN					
27...	1120	1400	245	3300	12500
AUG					
25...	1415	2770	187	3410	25500

06885600 BLACK VERMILLION RIVER NEAR FRANKFORT, KS

LOCATION.--Lat 39°41'03", long 96°26'15", in SE¼SW¼ sec.20, T.4 S., R.9 E., Marshall County, Hydrologic Unit 10270205, on right bank at downstream side of highway bridge, 0.2 mi (0.3 km) downstream from Robideau Creek, 2.2 mi (3.5 km) southwest of Frankfort, and at mile 19.9 (32.0 km).

DRAINAGE AREA.--410 mi² (1,060 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year. Monthly discharge only for October to December 1953, published in WSP 1730.

GAGE.--Water-stage recorder. Datum of gage is 1,106.91 ft (337.386 m) above mean sea level. Prior to May 13, 1954, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for October to February, which are poor.

AVERAGE DISCHARGE.--24 years, 134 ft³/s (3.795 m³/s), 97,080 acre-ft/yr (120 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,300 ft³/s (1,080 m³/s) May 30, 1959, gage height, 29.40 ft (8.961 m); maximum gage height, 30.06 ft (9.162 m) Oct. 11, 1973; no flow at times in 1955-57.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 3, 1948, reached a stage of 30.2 ft (9.20 m), present site and datum, from floodmarks. Flood in June 1951 reached a stage of 28.6 ft (8.72 m), present site and datum, from floodmarks, discharge, 30,400 ft³/s (861 m³/s), based on contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Aug. 28	1800	3,370	95.4	21.81	6.648
Sept. 4	0100	4,460	126	23.89	7.282
Sept. 13	1000	*16,600	470	29.24	8.912

Minimum discharge, 0.18 ft³/s (0.005 m³/s) Aug. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	6.9	6.9	7.2	6.9	15	16	8.3	66	9.3	.20	1660
2	4.9	7.0	7.2	7.0	7.2	15	15	9.2	35	6.5	.20	2280
3	4.8	7.0	7.4	6.7	7.6	17	14	9.5	23	5.9	.18	3390
4	4.7	6.6	7.7	6.6	8.2	23	24	9.9	16	4.2	.93	2640
5	4.7	6.4	8.0	6.4	8.8	20	39	9.2	12	2.8	.43	1150
6	4.8	6.1	8.2	6.2	8.6	16	35	9.6	8.1	2.1	3.8	323
7	5.0	6.0	8.5	6.0	11	15	24	35	5.6	1.8	9.0	180
8	5.2	5.6	8.2	5.8	12	15	18	15	4.7	1.7	6.7	120
9	5.4	5.3	8.2	5.8	13	16	15	9.9	4.2	1.7	2.5	88
10	5.4	5.2	8.2	5.6	15	17	13	7.9	3.6	4.4	1.2	70
11	5.0	5.2	8.2	5.6	16	20	12	6.8	3.4	4.9	8.1	60
12	4.7	5.2	8.2	5.6	18	21	11	6.2	5.2	29	39	1840
13	4.6	5.3	8.3	5.6	19	22	11	6.1	12	11	17	11200
14	4.5	5.3	8.4	5.7	20	20	12	6.0	7.0	3.3	4.2	4610
15	4.3	5.4	8.5	5.8	19	18	12	5.5	5.0	1.7	1.8	590
16	4.2	5.5	8.3	6.0	19	16	12	5.3	3.9	1.5	248	374
17	4.1	5.7	8.0	6.2	20	14	12	5.6	3.9	1.1	284	274
18	4.1	6.0	7.7	7.2	22	12	12	5.8	11	.80	58	199
19	4.1	6.2	7.6	8.0	24	12	13	7.6	38	.65	19	143
20	4.2	6.4	7.6	8.8	24	12	13	655	14	.50	7.5	115
21	4.3	6.7	7.8	9.7	23	12	14	92	108	.40	4.3	113
22	4.5	7.0	7.9	10	24	12	14	47	552	.35	3.3	140
23	4.7	7.4	8.2	10	33	12	15	24	60	.30	5.4	92
24	4.9	7.7	8.6	10	39	12	13	13	93	.30	8.2	80
25	5.1	8.0	9.2	9.6	24	11	11	8.7	443	.30	8.4	71
26	5.3	8.5	9.5	9.4	21	11	9.5	6.5	58	.29	8.7	56
27	5.6	7.6	10	8.6	18	12	9.0	6.8	26	.29	18	48
28	5.9	7.0	9.6	8.0	15	20	9.8	70	14	.31	2250	43
29	6.2	6.6	8.6	7.2	---	34	8.7	482	12	.32	1300	44
30	6.5	6.7	8.0	7.0	---	31	8.1	604	11	.34	133	50
31	6.8	---	7.8	7.0	---	23	---	176	---	.26	62	---
TOTAL	153.5	191.5	254.5	224.3	496.3	526	445.1	2343.4	1658.6	98.31	4513.04	32035
MEAN	4.95	6.38	8.21	7.24	17.7	17.0	14.8	75.6	55.3	3.17	146	1068
MAX	6.8	8.5	10	10	39	34	39	655	552	29	2250	11200
MIN	4.1	5.2	6.9	5.6	6.9	11	8.1	5.3	3.4	.26	.18	43
AC-FT	304	380	505	445	984	1040	883	4650	3290	195	8950	63540

CAL YR 1976 TOTAL 31561.30 MEAN 86.2 MAX 3870 MIN 1.3 AC-FT 62560
WTR YR 1977 TOTAL 42939.55 MEAN 118 MAX 11200 MIN .18 AC-FT 85170

06886900 TUTTLE CREEK LAKE NEAR MANHATTAN, KS

LOCATION.--Lat 39°15'16", long 96°36'08", in NW¼NE¼SW¼ sec.24, T.9 S., R.7 E., Pottawatomie County, Hydrologic Unit 10270205, on Big Blue River, near right end of dam, 5 mi (8 km) north of Manhattan and 10.0 mi (16.1 km) above mouth.

DRAINAGE AREA.--9,628 mi² (15,490 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--March to April 1960, March 1962 to current year. Prior to October 1968, published as Tuttle Creek Reservoir near Randolph. October 1968 to September 1971 published as Tuttle Creek Reservoir near Manhattan.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to July 1, 1968, at site 19.8 mi (31.9 km) upstream at same datum.

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Mar. 15, 1962. Total capacity, 3,227,000 acre-ft (3,980 hm³) consisting of the following: Sedimentation, 233,000 acre-ft (287 hm³) below elevation 1,061.0 ft (323.39 m); conservation pool, 192,300 acre-ft (237 hm³) between elevations 1,061.0 ft (323.39 m) and 1,075.0 ft (327.66 m); flood control pool, 1,942,000 acre-ft (2,390 hm³) between elevations 1,075.0 ft (327.66 m) and 1,136.0 ft (346.25 m); and surcharge pool, 860,300 acre-ft (1,060 hm³) between elevations 1,136.0 ft (346.25 m) and 1,150.0 ft (350.52 m). Reservoir is used to store water for flood control. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,127.90 ft (343.784 m) Oct. 18-20, 1973, contents, 1,958,000 acre-ft (2,410 hm³); minimum since conservation pool was first filled, 1,060.82 ft (323.338 m) Jan. 4, 1967, contents, 231,000 acre-ft (285 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,086.14 ft (331.055 m) Sept. 15, contents, 622,700 acre-ft (768 hm³); minimum, 1,072.17 ft (326.797 m), Feb. 7, 8, contents, 381,800 acre-ft (471 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on field survey by Corps of Engineers in 1962)

1,070	350,100	1,085	601,100
1,075	425,300	1,090	704,000
1,080	508,900		

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1074.16	1073.88	1073.22	1072.70	1072.25	1072.56	1073.26	1074.43	1079.17	1076.66	1075.41	1080.61
2	1074.16	1073.87	1073.20	1072.70	1072.23	1072.60	1073.35	1074.43	1079.10	1076.45	1075.43	1080.37
3	1074.16	1073.85	1073.20	1072.68	1072.23	1072.70	1073.43	1074.44	1078.98	1076.37	1075.55	1080.76
4	1074.30	1073.77	1073.16	1072.68	1072.21	1072.70	1073.48	1074.53	1078.87	1076.16	1075.72	1081.33
5	1074.25	1073.77	1073.19	1072.66	1072.21	1072.74	1073.48	1074.67	1078.76	1076.00	1075.82	1081.59
6	1074.24	1073.76	1073.13	1072.66	1072.19	1072.76	1073.54	1074.82	1078.55	1075.86	1076.08	1081.63
7	1074.22	1073.74	1073.10	1072.63	1072.17	1072.76	1073.57	1074.87	1078.31	1075.73	1076.26	1081.49
8	1074.25	1073.69	1073.06	1072.60	1072.19	1072.77	1073.59	1074.92	1078.22	1075.56	1076.30	1081.31
9	1074.28	1073.67	1073.08	1072.57	1072.19	1072.77	1073.55	1074.91	1078.03	1075.33	1076.35	1081.17
10	1074.32	1073.67	1073.00	1072.56	1072.20	1072.75	1073.50	1074.94	1078.05	1075.21	1076.57	1080.90
11	1074.35	1073.64	1073.00	1072.55	1072.23	1072.82	1073.55	1075.03	1078.10	1075.27	1076.77	1080.52
12	1074.37	1073.60	1072.97	1072.52	1072.23	1072.85	1073.55	1075.08	1078.30	1075.18	1077.06	1080.85
13	1074.36	1073.55	1072.95	1072.52	1072.22	1072.85	1073.59	1075.10	1078.31	1075.06	1077.43	1083.40
14	1074.32	1073.53	1072.97	1072.49	1072.23	1072.88	1073.63	1075.11	1078.34	1075.03	1077.66	1085.90
15	1074.29	1073.53	1072.94	1072.45	1072.23	1072.90	1073.63	1075.16	1078.32	1075.04	1077.81	1086.07
16	1074.25	1073.50	1072.94	1072.42	1072.27	1072.88	1073.67	1075.15	1078.38	1075.05	1078.42	1085.60
17	1074.13	1073.51	1072.92	1072.40	1072.30	1072.90	1073.71	1075.17	1078.32	1075.02	1079.40	1085.05
18	1074.13	1073.51	1072.92	1072.39	1072.31	1072.94	1073.75	1075.21	1078.63	1075.01	1080.30	1084.55
19	1074.13	1073.49	1072.94	1072.40	1072.34	1072.93	1073.83	1075.34	1078.59	1075.02	1080.41	1084.09
20	1074.10	1073.45	1072.86	1072.39	1072.36	1072.93	1073.95	1075.50	1078.47	1075.04	1080.12	1083.47
21	1074.06	1073.43	1072.84	1072.37	1072.40	1072.93	1074.04	1075.82	1078.41	1075.10	1079.78	1083.00
22	1074.07	1073.40	1072.85	1072.37	1072.45	1072.94	1074.11	1076.55	1078.78	1075.07	1079.57	1082.67
23	1074.08	1073.38	1072.83	1072.39	1072.50	1072.93	1074.15	1077.40	1078.68	1075.13	1079.64	1082.26
24	1073.99	1073.40	1072.83	1072.35	1072.50	1072.91	1074.18	1077.98	1078.82	1075.15	1079.25	1081.77
25	1073.95	1073.40	1072.83	1072.35	1072.58	1072.90	1074.24	1078.28	1079.16	1075.18	1079.17	1081.34
26	1073.94	1073.38	1072.80	1072.32	1072.60	1072.93	1074.27	1078.42	1079.09	1075.16	1079.31	1080.87
27	1073.92	1073.33	1072.82	1072.30	1072.61	1073.00	1074.31	1078.51	1078.66	1075.15	1079.41	1080.35
28	1073.90	1073.30	1072.79	1072.30	1072.64	1073.14	1074.35	1078.54	1078.15	1075.23	1081.35	1079.81
29	1073.90	1073.25	1072.77	1072.29	---	1073.14	1074.36	1078.64	1077.58	1075.31	1081.87	1079.25
30	1073.91	1073.25	1072.72	1072.27	---	1073.21	1074.40	1079.03	1077.04	1075.40	1081.45	1079.05
31	1073.90	---	1072.70	1072.26	---	1073.24	---	1079.21	---	1075.44	1080.99	---
MEAN	1074.14	1073.55	1072.95	1072.47	1072.32	1072.88	1073.80	1076.04	1078.47	1075.40	1078.28	1082.03
MAX	1074.37	1073.88	1073.22	1072.70	1072.64	1073.24	1074.40	1079.21	1079.17	1076.66	1081.87	1086.07
MIN	1073.90	1073.25	1072.70	1072.26	1072.17	1072.56	1073.26	1074.43	1077.04	1075.01	1075.41	1079.05
(+)	408,100	398,100	389,800	383,200	388,900	398,000	415,900	495,100	458,300	432,300	526,500	492,300
(♦)	-3,900	-10,000	-8,300	-6,600	+5,700	+9,100	+17,900	+79,200	-36,800	-26,000	+94,200	-34,200

CAL YR 1976 ....(♦) -37,600
WTR YR 1977 ....(♦) +80,300

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
♦ CHANGE IN CONTENTS, IN ACRE-FEET.

06887000 BIG BLUE RIVER NEAR MANHATTAN, KS
(National Stream-Quality Accounting Network Station)

LOCATION.--Lat 39°14'14", long 96°34'16", in SW¼NW¼SE¼ sec.30, T.9 S., R.8 E., Riley County, Hydrologic Unit 10270205, at downstream side of highway bridge, 2.5 mi (4.0 km) downstream from Tuttle Creek Dam, 4.0 mi (6.4 km) north of Manhattan, and 7.5 mi (12.1 km) upstream from mouth.

DRAINAGE AREA.--9,640 mi² (25,000 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to July 1951 (published in WSP 1139), October 1954 to current year. Records for April 1895 to October 1905, published in previous Annual Reports and Water-Supply Papers, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 988.86 ft (301.405 m) above mean sea level. May 1 to July 31, 1951, nonrecording gage above power dam 1.1 mi (1.8 km) upstream at datum 8.34 ft (2.542 m) higher. Oct. 1 to Nov. 17, 1954, nonrecording gage and Nov. 18, 1954 to Sept. 30, 1974, recording gage at present site and datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good. Flow regulated since 1962 by Tuttle Creek Lake (see sta 06886900).

AVERAGE DISCHARGE.--23 years (1954-77), 1,880 ft³/s (53.24 m³/s), 1,362,000 acre-ft/yr (1.68 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 93,400 ft³/s (2,650 m³/s) July 12, 1951, gage height, 36.04 ft (10.985 m), present site and datum, from floodmarks, from rating curve extended above 35,000 ft³/s (990 m³/s) on basis of slope-area measurement of peak flow; minimum, 6.0 ft³/s (0.17 m³/s) Jan. 28-Feb. 3, 1975. Maximum discharge since construction of Tuttle Creek Dam in 1962, 31,500 ft³/s (892 m³/s) June 19, 1967, gage height, 24.61 ft (7.501 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 31, 1903, reached a stage of 38.85 ft (11.841 m), and flood in June 1941 reached a stage of about 37.1 ft (11.31 m), from floodmarks and information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,680 ft³/s (274 m³/s) Sept. 17, gage height, 13.07 ft (3.984 m); minimum, 74 ft³/s (2.10 m³/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	384	362	366	330	330	308	300	306	4050	2280	626	7540
2	385	361	366	330	330	313	301	306	3450	2200	628	7200
3	386	360	366	330	330	312	306	306	3350	2170	742	7360
4	389	358	362	330	331	313	317	306	3410	2170	1060	7380
5	383	359	362	330	343	308	298	303	3240	2200	1050	7080
6	380	363	362	330	346	308	301	302	3110	2140	1100	6890
7	282	361	362	330	334	310	304	299	3090	2120	1050	6880
8	83	359	358	330	326	314	304	299	2710	2110	1050	6860
9	80	367	358	330	324	316	302	298	1420	1740	686	6810
10	79	366	362	330	324	315	299	295	502	1090	102	6750
11	80	366	358	330	321	317	299	294	502	1110	100	6680
12	113	362	358	342	321	314	298	294	500	1090	96	7060
13	277	362	354	338	320	312	305	294	500	884	96	4770
14	282	362	354	334	319	312	302	317	507	488	100	4090
15	316	364	356	333	318	311	302	331	1350	480	100	9540
16	351	366	357	330	318	308	299	333	2380	482	971	9490
17	352	368	360	330	321	311	301	321	2500	482	3740	9600
18	354	371	358	330	317	306	296	299	2500	475	5540	9600
19	354	373	358	333	314	306	300	350	2500	375	6750	9530
20	354	373	351	330	315	304	304	390	2500	222	6780	9450
21	355	372	352	330	317	303	305	390	2500	222	6790	8440
22	357	370	354	331	321	301	302	390	3500	222	6800	5760
23	363	374	350	332	319	306	300	390	4430	222	6910	5760
24	358	372	352	329	314	306	299	390	5230	222	6870	5740
25	356	381	354	326	314	302	298	978	6800	218	4840	5710
26	357	398	349	331	310	302	300	1800	6820	217	2170	5690
27	361	386	350	332	310	302	302	2020	6510	219	2100	5660
28	356	384	350	329	312	333	305	2430	6510	219	2100	5630
29	359	382	343	328	---	298	302	2350	6450	219	4350	5610
30	365	366	349	329	---	297	306	2340	4940	424	7390	3520
31	362	---	340	328	---	296	---	3350	---	628	7430	---
TOTAL	9615	11068	11031	10255	9019	9564	9057	23071	97761	29340	90117	208100
MEAN	310	369	356	331	322	309	302	744	3259	946	2907	6937
MAX	389	398	366	342	346	333	317	3350	6820	2280	7430	9600
MIN	79	358	340	326	310	296	296	294	500	217	96	3520
AC-FT	19070	21950	21880	20340	17890	18970	17960	45760	193900	58200	178700	412800

CAL YR 1976 TOTAL 353259 MEAN 965 MAX 8180 MIN 79 AC-FT 700700
WTR YR 1977 TOTAL 517998 MEAN 1419 MAX 9600 MIN 79 AC-FT 1027000

06887000 BIG BLUE RIVER NEAR MANHATTAN, KS--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-58, 1962 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1958, October 1974 to current year.
WATER TEMPERATURES: October 1955 to September 1958, October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 753 micromhos Jan. 20, 1957; minimum, 123 micromhos June 24, 1957.
WATER TEMPERATURES: Maximum, 31.5°C July 15, 1957; minimum, 0.0°C on several days during winter periods.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 840 micromhos was observed Jan. 22, 1962.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 725 micromhos Feb. 23; minimum daily, 237 micromhos, Sept. 16.
WATER TEMPERATURES: Maximum daily, 30.0°C July 29; minimum daily, 0.0°C on several days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
OCT 13...	285	500	7.9	20.0	10	210	26	62	14	21	.6	7.3
NOV 11...	332	500	7.9	9.0	8	210	29	60	14	22	.7	7.6
DEC 14...	345	518	8.0	2.5	8	220	35	64	14	23	.7	7.2
JAN 18...	376	650	7.8	1.0	5	230	37	67	16	30	.9	7.2
FEB 08...	290	760	7.6	3.0	4	280	36	80	20	40	1.0	7.0
MAR 08...	319	570	8.0	8.0	3	230	33	67	15	26	.7	6.9
APR 13...	300	590	7.7	13.0	15	200	29	56	15	28	.9	6.6
MAY 10...	297	540	7.9	19.0	15	210	38	58	16	28	.8	6.8
JUN 15...	920	648	7.8	24.0	15	200	33	56	14	27	.8	6.9
JUL 13...	1090	430	7.6	27.0	30	160	21	46	11	22	.8	7.7
AUG 19...	6800	373	7.7	25.0	20	150	19	44	9.7	21	.7	8.7
SEP 07...	6910	303	7.3	26.0	50	130	18	38	7.3	15	.6	8.2

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT 13...	227	0	54	18	.4	8.4	310	.42	239	1.1	.34	.13
NOV 11...	218	0	53	20	.4	7.8	316	.43	283	1.0	.53	.13
DEC 14...	222	0	60	19	.4	7.3	304	.41	283	.91	.72	.12
JAN 18...	239	0	67	34	.4	7.1	361	.49	366	.69	.58	.01
FEB 08...	300	0	82	38	.4	13	431	.59	337	.82	.53	.19
MAR 08...	239	0	59	23	.5	6.7	339	.46	292	.65	.23	.10
APR 13...	210	0	60	26	.4	.5	307	.42	249	.15	.66	.08
MAY 10...	210	0	61	23	.4	1.4	302	.41	242	.16	.80	.13
JUN 15...	200	0	56	24	.4	4.2	291	.40	723	.40	.39	.08
JUL 13...	170	0	47	19	.4	6.8	243	.33	715	1.2	.34	.14
AUG 19...	160	0	42	17	.4	9.3	237	.32	4350	1.4	.42	.18
SEP 07...	130	0	29	23	.4	10	191	.26	3560	1.4	.23	.27

06887000 BIG BLUE RIVER NEAR MANHATTAN, KS--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	CHLOR-A PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)
OCT								
13...	10.2	74	100	5.9	6100	3.36	7.39	8242
NOV								
11...	12.6	85	822	--	1100	--	--	--
DEC								
14...	13.8	<1	2	--	2300	--	--	--
JAN								
18...	14.4	<1	<1	--	2200	--	--	--
FEB								
08...	14.8	83	75	3.7	1800	--	--	--
MAR								
08...	14.0	<1	83	--	--	--	--	--
APR								
13...	11.0	810	27	--	--	--	--	--
MAY								
10...	10.4	82	830	4.4	11000	--	--	--
JUN								
15...	9.8	170	380	--	7700	--	--	--
JUL								
13...	8.5	57	500	--	--	--	--	--
AUG								
19...	8.6	93	2600	4.6	--	--	--	--
SEP								
07...	8.6	44	824	--	--	--	--	--

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
OCT										
13...	2	0	2	<10	<9	1	0	0	0	<50
FEB										
08...	--	--	2	<10	<10	0	0	0	0	<50
MAY										
10...	3	--	3	<10	<9	1	0	0	0	<50
AUG										
19...	3	1	2	<10	<7	3	10	10	0	<50

DATE	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)
OCT										
13...	<50	0	10	7	3	720	30	100	95	5
FEB										
08...	<50	0	<10	<8	2	200	0	100	99	1
MAY										
10...	<50	0	<10	<9	1	420	10	<100	<97	3
AUG										
19...	<49	1	10	4	6	840	20	<100	<73	27

DATE	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT										
13...	10	50	40	.1	1	0	1	10	0	10
FEB										
08...	80	160	80	.0	2	0	2	30	20	10
MAY										
10...	180	250	70	.0	1	0	1	10	1	9
AUG										
19...	8	40	30	.2	1	0	1	10	0	10

06887000 BIG BLUE RIVER NEAR MANHATTAN, KS--Continued
(National stream-quality accounting network station)

PHYTOPLANKTON ANALYSES (OCT,1976 - JUL,1977)

DATE	OCT 13,76	NOV 11,76	DEC 14,76	JAN 18,77
TIME	1330	1415	1445	1130
TOTAL CELLS/ML	6100	1100	2300	2200
DIVERSITY: DIVISION	1.0	1.3	1.1	1.7
.CLASS	1.0	1.4	1.1	1.7
..ORDER	1.9	1.7	1.5	1.7
...FAMILY	2.4	1.8	1.5	1.8
....GENUS	2.8	1.9	1.5	1.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....MICRACTINIUM	170	3	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	170	3	--	-	110	5	--	-
....CHODATELLA	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	43	2	--	-
....OOCYSTIS	390	6	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	440	7	--	-	--	-	--	-
....SCENEDESMUS	330	5	50	4	--	-	--	-
....TETRASTRUM	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	390	6	--	-	64	3	1000#	44
...PHACOTACEAE								
....PHACOTUS	--	-	--	-	--	-	--	-
...VOLVOCACEAE								
....PANDORINA	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	2500#	42	130	11	1700#	72	--	-
....MELOSIRA	220	4	13	1	--	-	--	-
..PENNALES								
...DIATOMACEAE								
....DIATOMA	55	1	25	2	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	13	1	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	25	2	--	-	--	-
...NAVICULACEAE								
....NAVICULA	220	4	50	4	21	1	--	-
...NITZSCHIACEAE								
....DENTICULA	--	-	--	-	--	-	--	-
....NITZSCHIA	1000#	17	--	-	--	-	69	3
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	14	1
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...OCHROMONADACEAE								
....DINOBRYON	--	-	--	-	--	-	--	-
....OCHROMONAS	--	-	38	3	--	-	140	6
CYANOPHYTA (BLUE-GREEN ALGAE)								
.MYXOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	170	7	--	-
..OSCILLATORIALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
....ANABAENOPSIS	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	210	9	69	3
....OSCILLATORIA	--	-	--	-	--	-	830#	37
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	760#	66	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06887000 BIG BLUE RIVER NEAR MANHATTAN, KS--Continued
(National stream-quality accounting network station)

PHYTOPLANKTON ANALYSES (OCT.1976 - JUL.1977)

DATE	OCT 13.76		NOV 11.76		DEC 14.76		JAN 18.77	
TIME	1330		1415		1445		1130	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOMONODACEAE								
....CRYPTOMONAS	110	2	--	-	--	-	97	4
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	50	4	21	1	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	28	1

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
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06887000 BIG BLUE RIVER NEAR MANHATTAN, KS--Continued
(National stream-quali y accounting network station)

PHYTOPLANKTON ANALYSES (OCT.1976 - JUL.1977)

		FEB 8.77		MAY 10.77		JUN 15.77		JUL 13.77	
DATE		FEB 8.77		MAY 10.77		JUN 15.77		JUL 13.77	
TIME		1115		1500		1045		1145	
TOTAL CELLS/ML		1800		11000		7700		490	
DIVERSITY:	DIVISION	1.4		1.4		1.5		1.7	
	.CLASS	1.4		1.5		1.5		1.7	
	..ORDER	1.5		2.2		2.2		2.2	
	...FAMILY	1.6		2.5		2.6		2.8	
	....GENUS	1.7		2.6		3.1		3.5	

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	160	2	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	26	5
...MICRACTINIACEAE								
....MICRACTINIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	31	2	600	5	1000	13	7	1
....CHODATELLA	--	-	*	0	110	1	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	59	12
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	3	1
....TETRAEDRON	--	-	--	-	110	1	3	1
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	460	4	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	230	2	--	-	49	10
....TETRASTRUM	--	-	230	2	--	-	16	3
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	--	-	--	-	440	6	3	1
....CHLAMYDOMONAS	550#	31	--	-	2700#	35	46	9
...PHACOTACEAE								
....PHACOTUS	--	-	140	1	--	-	--	-
...VOLVOCACEAE								
....PANDORINA	--	-	--	-	110	1	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	71	4	430	4	330	4	66	13
....MELOSIRA	39	2	--	-	110	1	56	11
..PENNALES								
...DIATOMACEAE								
....DIATOMA	*	0	86	1	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	290	2	--	-	--	-
....SYNEDRA	--	-	--	-	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	--	-	--	-	--	-
...NAVICULACEAE								
....NAVICULA	24	1	86	1	--	-	20	4
...NITZSCHIACEAE								
....DENTICULA	*	0	--	-	--	-	--	-
....NITZSCHIA	16	1	1300	11	54	1	7	1
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...OCHROMONADACEAE								
....DINOBRYON	--	-	140	1	--	-	--	-
....OCHROMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.MYXOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	1600#	15	--	-	--	-
....ANACYSTIS	--	-	--	-	380	5	--	-
..OSCILLATORIALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	1000	13	82#	17
....ANABAENOPSIS	--	-	--	-	--	-	33	7
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	5500#	48	760	10	--	-
...RIVULARIACEAE								
....RAPHIDIOPSIS	1000#	57	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06887000 BIG BLUE RIVER NEAR MANHATTAN, KS--Continued
(National stream-quality accounting network station)

PHYTOPLANKTON ANALYSES (OCT.1976 - JUL.1977)

DATE TIME	FEB 8.77 1115		MAY 10.77 1500		JUN 15.77 1045		JUL 13.77 1145	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOMONODACEAE								
....CRYPTOMONAS	--	-	110	1	--	-	16	3
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	16	1	--	-	--	-	--	-
....TRACHELOMONAS	--	-	110	1	380	5	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	54	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SUS- PENDED SEDI- MENT (MG/L)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY)
OCT					
13...	1335	265	650	21	16
NOV					
11...	1420	342	670	14	13
DEC					
14...	1450	345	530	7	6.5
MAY					
10...	1505	297	520	42	34
JUN					
15...	1045	920	640	71	176
JUL					
13...	1145	1090	430	61	180
AUG					
19...	1150	6800	373	41	753
SEP					
07...	1430	6900	--	65	1210

06887000 BIG BLUE RIVER NEAR MANHATTAN, KS--Continued
(National stream-quality accounting network station)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	491	509	515	529	673	547	513	521	509	448	423	309
2	489	508	514	523	672	550	561	522	508	450	407	310
3	493	506	514	529	675	552	516	521	508	439	408	308
4	496	506	514	530	690	552	515	522	507	439	403	313
5	493	508	514	530	702	552	548	524	508	439	401	313
6	496	508	514	532	704	551	510	519	508	438	399	316
7	496	511	518	538	705	553	508	522	507	434	401	318
8	508	510	518	543	709	556	512	519	504	428	400	311
9	503	507	516	534	709	561	512	520	508	432	398	309
10	504	509	519	535	709	553	516	520	510	431	419	302
11	511	509	520	536	717	558	516	523	510	430	418	293
12	509	509	519	535	712	557	514	522	504	423	426	291
13	504	511	528	535	709	554	516	523	504	419	429	320
14	503	508	514	535	705	552	518	521	505	427	420	289
15	506	506	516	564	708	559	521	524	485	426	423	285
16	504	505	523	562	712	555	523	521	483	426	423	237
17	504	512	526	565	712	556	525	522	482	424	396	238
18	504	507	528	570	716	545	525	524	475	420	396	265
19	506	511	526	583	711	548	530	520	474	422	394	261
20	506	508	526	593	712	547	516	521	469	428	394	248
21	505	508	527	599	711	549	523	508	466	430	383	254
22	506	510	532	603	704	561	521	508	463	428	333	254
23	508	509	530	597	725	548	521	508	468	424	329	245
24	508	508	524	622	615	545	523	519	454	428	320	244
25	506	508	527	624	573	556	522	519	453	420	298	243
26	507	511	523	638	552	547	519	517	446	421	266	245
27	506	508	523	646	549	542	518	516	451	422	268	245
28	508	511	524	652	548	537	522	514	458	423	306	244
29	506	510	530	658	---	517	522	513	448	421	306	243
30	506	516	531	657	---	513	519	515	446	416	320	256
31	511	---	528	667	---	501	---	508	---	409	316	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	12.0	4.0	0.0	3.0	4.0	10.0	17.0	21.0	25.0	27.0	26.0
2	21.0	12.0	4.0	1.0	2.0	4.0	9.0	17.0	22.0	26.0	27.0	26.0
3	21.0	11.0	4.0	0.0	3.0	5.0	9.0	17.0	21.0	26.0	26.0	26.0
4	18.0	10.0	5.0	1.0	2.0	4.0	8.0	18.0	21.0	26.0	28.0	26.0
5	18.0	10.0	5.0	1.0	1.0	4.0	9.0	18.0	21.0	26.0	28.0	26.0
6	17.0	11.0	3.0	1.0	0.0	9.0	11.0	19.0	23.0	27.0	29.0	26.0
7	17.0	10.0	3.0	1.0	0.0	6.0	13.0	18.0	22.0	27.0	29.0	25.0
8	16.0	10.0	2.0	0.0	1.0	8.0	13.0	18.0	21.0	26.0	28.0	25.0
9	16.0	11.0	4.0	0.0	2.0	7.0	10.0	18.0	21.0	27.0	27.0	24.0
10	16.0	10.0	2.0	1.0	3.0	7.0	10.0	18.0	23.0	26.0	27.0	24.0
11	17.0	9.0	2.0	1.0	4.0	6.0	12.0	18.0	22.0	25.0	25.0	24.0
12	17.0	7.0	3.0	1.0	5.0	6.0	14.0	19.0	22.0	27.0	24.0	25.0
13	18.0	7.0	3.0	2.0	4.0	10.0	12.0	18.0	23.0	27.0	26.0	24.0
14	18.0	7.0	3.0	2.0	3.0	11.0	13.0	19.0	24.0	28.0	27.0	24.0
15	17.0	7.0	3.0	1.0	4.0	8.0	13.0	19.0	22.0	28.0	26.0	23.0
16	16.0	8.0	3.0	1.0	3.0	8.0	14.0	20.0	22.0	28.0	26.0	23.0
17	14.0	9.0	4.0	1.0	3.0	9.0	14.0	20.0	23.0	28.0	26.0	23.0
18	14.0	9.0	4.0	1.0	5.0	9.0	14.0	19.0	24.0	28.0	26.0	24.0
19	14.0	8.0	3.0	2.0	5.0	8.0	16.0	19.0	24.0	26.0	26.0	23.0
20	14.0	7.0	1.0	3.0	4.0	8.0	15.0	19.0	24.0	27.0	26.0	23.0
21	14.0	7.0	1.0	3.0	6.0	8.0	13.0	19.0	24.0	27.0	27.0	24.0
22	14.0	6.0	2.0	2.0	6.0	10.0	13.0	17.0	24.0	29.0	25.0	24.0
23	14.0	7.0	2.0	2.0	4.0	11.0	14.0	18.0	24.0	29.0	25.0	24.0
24	13.0	8.0	3.0	3.0	7.0	10.0	14.0	20.0	25.0	28.0	24.0	22.0
25	13.0	8.0	2.0	3.0	5.0	10.0	15.0	21.0	25.0	27.0	26.0	23.0
26	13.0	6.0	2.0	3.0	5.0	10.0	17.0	20.0	25.0	26.0	25.0	23.0
27	12.0	4.0	2.0	5.0	4.0	10.0	16.0	20.0	25.0	25.0	25.0	23.0
28	11.0	4.0	2.0	2.0	5.0	11.0	17.0	20.0	24.0	29.0	25.0	22.0
29	11.0	4.0	1.0	2.0	---	11.0	17.0	22.0	24.0	30.0	25.0	21.0
30	11.0	4.0	0.0	3.0	---	110.0	17.0	20.0	24.0	28.0	25.0	22.0
31	12.0	---	0.0	2.0	---	10.0	---	21.0	---	26.0	25.0	---

06887500 KANSAS RIVER AT WAMEGO, KS

LOCATION.--Lat 39°11'52", long 96°18'16", in NW¼SW¼NE¼ sec.9, T.10 S., R.10 E., Pottawatomie County, Hydrologic Unit 10270102, at downstream side of bridge on State Highway 99 at Wamego, 3.0 mi (4.8 km) downstream from Antelope Creek, and at mile 126.9 (204.2 km)

DRAINAGE AREA.--55,280 mi² (143,200 km²), approximately, of which a large area is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1919 to current year.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1310: 1937(M).

GAGE.--Water-stage recorder. Datum of gage is 950.82 ft (289.810 m) above mean sea level. Prior to Aug. 1, 1934, nonrecording gage and Aug. 1, 1934, to Sept. 30, 1955, water-stage recorder at present site at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good. Natural flow of stream affected by reservoirs in Colorado, Nebraska, and Kansas, and by numerous small diversions for irrigation above station.

AVERAGE DISCHARGE.--58 years, 4,858 ft³/s (137.6 m³/s), 3,520,000 acre-ft/yr (4.34 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400,000 ft³/s (11,300 m³/s) July 13, 1951, gage height, 30.56 ft (9.315 m), present datum, from rating curve extended above 170,000 ft³/s (4,810 m³/s) on basis of slope-area measurement of peak flow and flood routing studies; minimum, 73 ft³/s (2.07 m³/s) Dec. 14, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1903 reached a stage of 29.3 ft (8.93 m), present datum, determined by U.S. Weather Bureau, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 8,000 ft³/s (227 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 1	0700	20,400	578	10.59	3.228	June 25	0500	24,400	691	11.61	3.539
June 19	0700	*36,600	1,040	14.09	4.295	Sept. 1	0800	27,400	776	12.28	3.743

Minimum daily discharge, 520 ft³/s (14.7 m³/s) Jan. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	814	894	902	600	600	718	790	806	19300	8720	2280	24300
2	806	886	990	600	630	726	814	788	14200	7000	2290	19000
3	806	870	974	600	660	742	782	819	12000	5870	2260	20900
4	814	854	886	600	660	703	862	784	13100	6000	2520	21200
5	894	838	854	600	660	696	870	733	10800	7860	2790	18300
6	926	838	862	600	660	696	822	727	7770	6550	2810	14600
7	942	838	900	600	660	689	806	760	6040	5670	2750	14200
8	1640	822	800	600	660	682	806	783	5280	5410	3160	14200
9	2780	830	850	520	700	682	790	767	4100	6010	3740	13600
10	2780	822	900	520	750	675	750	830	2710	3410	3340	12900
11	2470	814	900	600	800	689	726	859	2180	3020	2710	10800
12	1710	814	900	600	850	696	718	803	3130	[illegible]	2700	11200
13	1230	814	900	600	900	682	718	748	2600	[illegible]	2640	15100
14	1100	822	900	600	958	682	710	715	1800	[illegible]	2430	6070
15	982	822	900	600	862	675	703	718	1730	2080	2470	12400
16	926	822	894	600	846	682	710	713	3660	2220	2470	12900
17	894	830	878	600	838	689	726	729	5040	3160	4320	13900
18	862	838	838	600	830	682	750	700	18900	3180	7230	13700
19	838	862	846	650	806	682	750	806	32300	3170	9800	13200
20	862	870	750	700	782	696	774	3440	21700	2920	10100	12900
21	862	870	718	750	782	682	838	2420	12600	2720	10500	12800
22	854	870	696	700	782	668	926	3250	18000	2700	10800	9360
23	870	878	822	720	774	661	918	4020	18300	2650	12100	8890
24	862	886	934	740	774	668	926	3470	19400	2630	13000	8730
25	846	870	982	760	750	654	942	3130	22300	2610	11900	8630
26	838	838	966	800	742	654	920	3020	20700	2580	8500	8560
27	876	838	878	800	734	661	888	2850	16300	2620	7870	8490
28	878	878	854	700	726	782	854	3280	15000	2620	9350	8430
29	870	838	838	600	---	886	814	3740	13600	2580	11200	8470
30	910	854	750	600	---	774	822	4760	12800	2490	19500	7860
31	910	---	600	600	---	750	---	12700	---	2250	21200	---
TOTAL	34654	25428	26662	19760	21176	21704	24225	64660	357340	118850	210730	385590
MEAN	1118	848	860	637	756	700	808	2086	11910	3834	6798	12850
MAX	2780	894	990	800	958	886	942	12700	32300	8720	21200	24300
MIN	806	814	600	520	600	654	703	700	1730	2080	2260	6070
AC-FT	68740	50440	52880	39190	42000	43050	48050	128300	708800	235700	418000	764800

CAL YR 1976 TOTAL 925607 MEAN 2529 MAX 20500 MIN 600 AC-FT 1836000
WTR YR 1977 TOTAL 1310779 MEAN 3591 MAX 32300 MIN 520 AC-FT 2600000

06887500 KANSAS RIVER AT WAMEGO, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1956 to September 1958, October 1961 to September 1975.
WATER TEMPERATURES: October 1956 to September 1975.
SUSPENDED-SEDIMENT DISCHARGE: October 1957 to September 1975.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR					
10...	1400	691	--	54	101
APR					
25...	1200	947	1080	161	412
JUN					
10...	1300	2620	750	446	3160
JUL					
01...	1430	8300	335	302	6770
AUG					
29...	1245	10500	430	1730	49000

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
MAR										
10...	1400	10	54	0	0	32	74	87	95	100

06888500 MILL CREEK NEAR PAXICO, KS

LOCATION.--Lat 39°03'44", long 96°10'52", in SW¼NE¼SW¼ sec.27, T.11 S., R.11 E., Wabaunsee County, Hydrologic Unit 10270102, at downstream side of bridge on Interstate Highway 70, 1.0 mi (1.6 km) southwest of Paxico, 2.0 mi (3.2 km) downstream from Kuenzli Creek, and 16.0 mi (25.7 km) upstream from mouth.

DRAINAGE AREA.--316 mi² (818 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1953 to current year.

REVISED RECORDS.--WSP 1560: 1954, 1957.

GAGE.--Water-stage recorder. Datum of gage is 964.92 ft (294.108 m), above mean sea level. Prior to Apr. 15, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--23 years (1954-77), 173 ft³/s (4.899 m³/s), 125,300 acre-ft/yr (154 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,200 ft³/s (1,200 m³/s) Sept. 26, 1973, gage height, 32.21 ft (9.818 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 34.7 ft (10.58 m) July 12, 1951, from floodmarks, discharge, 77,200 ft³/s (2,190 m³/s), from contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 20	0400	3,190	90.3	10.06	3.066	June 21	1900	9,060	257	18.83	5.739
May 21	1300	5,120	145	13.18	4.017	June 23	2100	8,000	227	17.47	5.325
May 30	2200	9,420	267	19.27	5.873	June 25	0300	5,640	160	13.98	4.261
June 18	1700	12,900	365	22.89	6.977	Sept. 1	0800	2,950	83.5	9.66	2.944
June 19	1300	*23,700	671	28.28	8.620						

Minimum discharge, 0.80 ft³/s (0.023 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	4.3	8.8	6.4	7.7	9.2	16	28	577	258	37	1680
2	6.9	3.9	8.8	6.4	8.0	9.4	15	33	364	223	35	335
3	6.5	2.2	8.8	7.1	8.0	11	14	30	287	209	34	190
4	6.4	2.2	8.8	8.3	8.9	11	17	26	226	170	34	142
5	6.8	3.5	8.8	8.4	9.6	11	18	25	177	143	107	140
6	6.8	4.0	8.8	8.6	9.7	10	18	23	140	127	68	123
7	6.8	4.4	8.8	8.8	9.5	9.7	17	21	111	112	47	109
8	6.8	5.3	8.6	8.8	9.3	9.1	16	20	101	122	38	98
9	6.8	7.9	8.4	7.6	10	8.4	15	19	91	121	33	89
10	6.6	8.4	8.4	6.7	11	8.6	13	18	82	104	30	80
11	5.9	8.4	8.4	6.4	12	9.5	12	17	73	176	28	75
12	5.7	8.8	8.4	6.4	12	9.7	10	16	165	189	28	95
13	5.7	9.7	8.4	7.1	12	10	10	15	71	126	29	369
14	5.8	10	8.4	8.2	11	9.7	11	14	64	102	95	132
15	5.9	10	8.4	9.2	9.5	8.9	12	13	59	87	43	102
16	4.7	11	8.4	8.7	9.3	7.0	12	12	54	80	39	93
17	3.8	11	8.4	8.2	9.3	5.5	12	17	92	73	39	85
18	3.8	10	8.4	7.7	9.4	5.8	12	18	6340	68	39	77
19	3.6	10	8.4	7.6	9.3	4.5	12	56	13300	62	35	71
20	3.0	9.8	8.4	7.9	9.3	4.5	14	1400	1650	58	34	68
21	3.2	9.6	7.8	.5	9.6	3.9	16	1770	3490	55	33	72
22	2.5	9.6	7.6	2	10	3.9	57	472	3550	57	39	71
23	2.0	9.6	7.6	[illegible]	10	3.9	52	222	2790	54	266	63
24	2.5	9.6	7.6	9.6	11	3.9	36	150	1790	51	74	65
25	2.2	9.3	7.7	9.6	11	4.2	31	115	2630	48	51	61
26	2.2	9.0	8.0	9.4	10	4.1	28	97	926	46	45	57
27	3.6	8.8	8.0	9.2	10	4.1	26	99	618	45	39	54
28	4.2	8.8	7.9	8.7	9.6	20	24	301	465	44	41	52
29	4.0	8.8	8.0	8.4	---	35	23	416	375	44	45	55
30	4.3	8.8	7.3	8.2	---	22	23	3710	314	41	44	61
31	4.6	---	6.7	7.8	---	19	---	2210	---	38	71	---
TOTAL	150.9	236.7	255.2	252.4	276.0	295.7	592	11383	40972	3133	1620	4764
MEAN	4.87	7.89	8.23	8.14	9.86	9.54	19.7	367	1366	101	52.3	159
MAX	7.3	11	8.8	9.6	12	35	57	3710	13300	258	266	1680
MIN	2.0	2.2	6.7	6.4	7.7	3.9	10	12	54	38	28	52
AC-FT	299	469	506	501	547	587	1170	22580	81270	6210	3210	9450

CAL YR 1976 TOTAL 39657.4 MEAN 108 MAX 4550 MIN 2.0 AC-FT 78660
WTR YR 1977 TOTAL 63930.9 MEAN 175 MAX 13300 MIN 2.0 AC-FT 126800

06888705 KANSAS RIVER AT WILLARD, KS

LOCATION.--Lat 39°05'54", long 95°56'47", in NE¼SE¼NE¼ sec.15, T.11 S., R.13 E., Shawnee County, Hydrologic Unit 10270102, at county highway bridge, 0.5 mi (0.8 km) north of Willard.

DRAINAGE AREA.--Not determined.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	DIS- SOLVED OXYGEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	TOTAL CAL- CIUM (CA) (MG/L)	TOTAL MAG- NE- SIUM (MG) (MG/L)
OCT										
26...	882	8.4	8.5	--	50	10.7	20	250	68	9.6
NOV										
22...	1160	8.3	5.0	--	16	12.7	20	72	85	20
DEC										
20...	1360	8.2	.5	--	23	12.6	19	268	110	260
JAN										
24...	1250	7.8	1.0	--	5.4	12.8	6	410	97	24
FEB										
22...	1150	8.4	8.0	--	17	10.7	6	88	99	23
MAR										
21...	1200	8.2	8.0	--	--	10.6	30	25	83	22
APR										
25...	1140	8.0	12.5	--	65	9.5	44	150	82	23
MAY										
23...	320	7.7	19.0	--	800	6.8	160	8300	70	19
JUN										
24...	330	8.0	21.5	--	800	7.4	87	4500	96	22
JUL										
25...	648	8.5	27.5	30	--	7.2	30	817	68	18
AUG										
22...	550	8.2	24.0	--	69	7.0	23	1900	61	13
SEP										
26...	400	8.3	20.5	180	--	6.5	30	--	41	11

B Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	TOTAL SODIUM (NA) (MG/L)	TOTAL PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)
OCT									
26...	43	3.9	260	0	213	1.7	130	120	566
NOV									
22...	110	7.4	280	0	230	2.2	150	150	675
DEC									
20...	140	7.6	270	0	221	2.7	170	180	796
JAN									
24...	110	7.0	300	0	246	7.6	140	140	708
FEB									
22...	110	6.9	300	0	246	1.9	150	140	688
MAR									
21...	130	7.3	240	0	197	2.4	150	180	718
APR									
25...	120	7.7	210	0	172	3.4	160	160	663
MAY									
23...	15	12	110	0	90	3.5	34	16	190
JUN									
24...	15	14	140	0	115	2.2	40	14	208
JUL									
25...	59	9.7	180	0	148	.9	100	64	403
AUG									
22...	40	8.7	340	0	279	3.4	69	47	332
SEP									
26...	25	9.3	150	0	123	1.2	43	27	249

06888705 KANSAS RIVER AT WILLARD, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (TONS PER AC-FT)	TOTAL RESI-DUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
OCT									
26...	.77	637	.92	.03	.65	.68	1.6	7.1	.26
NOV									
22...	.92	707	.02	.00	.50	.50	.52	2.3	.18
DEC									
20...	1.08	846	.64	.19	.42	.61	1.3	5.5	.19
JAN									
24...	.96	722	.63	.43	.00	.28	.91	4.0	.22
FEB									
22...	.94	731	.51	.08	.00	.00	.51	2.3	.20
MAR									
21...	.98	751	.01	.02	.98	1.0	1.0	4.5	.14
APR									
25...	.90	762	.03	.00	1.6	1.6	1.6	7.2	.22
MAY									
23...	.26	1870	.97	.08	4.1	4.2	5.2	23	.91
JUN									
24...	.28	2210	.54	.06	2.6	2.7	3.2	14	.93
JUL									
25...	.55	520	.01	.00	.65	.65	.66	2.9	.13
AUG									
22...	.45	571	1.1	.03	.96	.99	2.1	9.3	.28
SEP									
26...	.34	548	1.1	.09	.85	.94	2.0	9.0	.34

06889000 KANSAS RIVER AT TOPEKA, KS

LOCATION.--Lat 39°04'00", long 95°38'58", in SW¼SW¼NW¼ sec.28, T.11 S., R.16 E., Shawnee County, Hydrologic Unit 10270102, near right bank at downstream side of Sardou Bridge in Topeka, 2.3 mi (3.7 km) upstream from Soldier Creek (diversion channel) and at mile 83.1 (133.7 km).

DRAINAGE AREA.--56,720 mi² (146,900 km²), approximately, of which a large area is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to August 1904 (gage heights only), June 1917 to current year. Gage-height records for this vicinity since August 1904 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1310: 1920(M), 1922(M).

GAGE.--Water-stage recorder. Datum of gage is 851.66 ft (259.586 m) above mean sea level. Prior to Feb. 28, 1961, recording or nonrecording gages at several sites within 8,000 ft (2,400 m) of present site at various datums.

REMARKS.--Records good except those for winter periods, which are poor. Natural flow of stream affected by reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--60 years, 5,407 ft³/s (153.1 m³/s), 3,917,000 acre-ft/yr (4.83 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 469,000 ft³/s (13,300 m³/s) July 13, 1951, gage height, 35.8 ft (10.91 m), from floodmark, present site and datum; minimum, 112 ft³/s (3.17 m³/s) Dec. 16, 1940, result of freezeup. Maximum stage known since at least 1844, that of July 13, 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1903 (second highest since 1844) reached a stage of about 33 ft (10.1 m), present site and datum, from floodmarks at site 5,900 ft (1,800 m) upstream, discharge, about 300,000 ft³/s (8,500 m³/s). A flood in the spring of 1844 is known to have been higher than that of 1903 and on the basis of legendary marks or deductions is believed to be the greatest known.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 12,000 ft³/s (340 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 20	2300	12,200	346	7.14	2.176	Aug. 23	2100	13,000	368	7.48	2.280
June 1	2100	20,600	583	9.68	2.950	Aug. 29	0900	16,100	456	8.56	2.609
June 19	1500	*51,400	1,460	16.87	5.142	Sept. 1	1400	35,300	1,000	13.66	4.164
June 22	0700	36,300	1,030	13.86	4.225	Sept. 13	2000	50,000	1,420	16.59	5.057
June 25	0800	33,500	949	13.27	4.045	Sept. 18	0600	14,900	422	8.18	2.493

Minimum daily discharge, 560 ft³/s (15.9 m³/s) Jan. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	875	935	820	600	650	730	850	916	18100	12900	2150	33300
2	872	946	860	620	680	730	902	885	17800	9520	2150	26100
3	859	927	960	620	700	760	930	860	13100	7800	2140	20900
4	879	899	980	640	700	780	998	857	12200	6960	2190	22500
5	933	863	980	640	700	790	1010	900	12700	7310	2640	21600
6	927	870	980	640	700	797	1010	826	9900	8420	2710	17100
7	999	889	900	620	700	851	970	800	7420	7120	2660	14500
8	1000	843	800	620	720	921	927	817	6160	6470	2570	14400
9	1250	860	800	560	760	949	859	862	5520	6280	2780	14100
10	2220	870	870	580	800	894	787	817	4500	6460	3300	13300
11	2280	884	900	620	850	1040	795	815	3230	4220	3030	12700
12	2130	854	860	640	880	950	772	862	4170	3890	2520	14300
13	1610	845	860	620	920	865	795	839	4430	3670	2480	40600
14	1180	839	860	660	950	908	796	780	3120	3320	2530	30300
15	1060	839	900	640	950	972	787	715	2320	2900	2350	10800
16	944	834	960	640	870	857	781	785	2180	2600	2440	14100
17	876	848	1050	610	860	845	786	859	4000	2570	2520	14100
18	839	860	950	610	860	836	809	787	9730	3230	4140	14800
19	830	852	860	610	820	764	843	982	45200	3270	7100	13900
20	800	853	850	680	820	744	880	7420	37100	3240	9280	13400
21	833	880	800	770	830	765	901	10700	26400	3010	9470	13300
22	821	866	780	760	820	766	918	6040	32400	2870	10000	12500
23	910	867	800	760	820	782	1010	6010	24000	2770	11700	9790
24	887	877	800	780	800	780	1070	5640	24100	2700	12300	9770
25	861	878	850	800	800	755	1000	3940	31900	2630	12400	9640
26	838	911	850	830	770	783	997	3410	24000	2570	10700	9130
27	919	740	850	850	760	803	968	3300	21500	2500	8430	8890
28	892	740	800	750	730	805	957	3410	17200	2500	7940	8700
29	886	760	750	640	---	922	906	4280	15800	2490	13600	8690
30	979	800	700	620	---	994	926	5990	14500	2420	13400	8680
31	973	---	650	620	---	872	---	14000	---	2340	20000	---
TOTAL	33162	25729	26630	20650	22220	25858	26940	90104	454680	140950	193620	475890
MEAN	1070	858	859	666	794	834	898	2907	15160	4547	6246	15860
MAX	2280	946	1050	850	950	1040	1070	14000	45200	12900	20000	40600
MIN	800	740	650	560	650	730	772	715	2180	2340	2140	8680
AC-FT	65780	51030	52820	40960	44070	51290	53440	178700	901900	279600	384000	943900

CAL YR 1976 TOTAL 1065447 MEAN 2911 MAX 25300 MIN 650 AC-FT 2113000
WTR YR 1977 TOTAL 1536433 MEAN 4209 MAX 45200 MIN 560 AC-FT 3048000

06889100 SOLDIER CREEK NEAR GOFF, KS

LOCATION.--Lat 39°37'27", long 95°57'57", in NW¼NW¼NE¼ sec.16, T.6 S., R.13 E., Nemaha County, Hydrologic Unit 10270102, 20 ft (6 m) downstream from highway bridge, 3.3 mi (5.3 km) southwest of Goff, and at mile 71.9 (115.7 km).

DRAINAGE AREA.--2.06 mi² (5.34 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,297.10 ft (395.356 m) above mean sea level.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--13 years, 1.21 ft³/s (0.034 m³/s), 877 acre-ft/yr (1.08 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,080 ft³/s (201 m³/s) May 10, 1970, gage height, 15.18 ft (4.627 m), from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of slope-area measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 19	1730	539	15.3	10.88	3.316	Sept. 12	0845	547	15.5	10.93	3.331
Aug. 31	2100	* 952	27.0	12.43	3.789	Sept. 12	2200	367	10.4	9.56	2.914
Sept. 2	0730	436	12.3	10.13	3.088	Sept. 23	2130	118	3.34	6.46	1.969
Sept. 4	1145	249	7.05	8.28	2.524						

Minimum discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.04	.12	.00	.33	.00	.00	13
2	.00	.00	.00	.00	.00	.08	.06	.00	.17	.00	.00	68
3	.00	.00	.00	.00	.00	.56	.08	.00	.06	.00	.00	4.1
4	.00	.00	.00	.00	.00	.15	1.1	.00	.03	.00	.00	45
5	.00	.00	.00	.00	.00	.08	.29	.02	.02	.00	.00	3.8
6	.00	.00	.00	.00	.00	.08	.10	1.9	.00	.00	.02	1.1
7	.00	.00	.00	.00	.00	.10	.04	.18	.00	.00	.00	.56
8	.00	.00	.00	.00	.00	.08	.00	.06	.00	.00	.00	.34
9	.00	.00	.00	.00	.04	.04	.01	.01	.00	.00	.00	.24
10	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.07
11	.00	.00	.00	.00	.25	.24	.00	.00	.00	.10	.00	.11
12	.00	.00	.00	.00	.35	.15	.08	.00	.00	.00	.00	156
13	.00	.00	.00	.00	.30	.06	.02	.00	.00	.00	.00	27
14	.00	.00	.00	.00	.05	.06	.00	.00	.00	.00	.00	2.5
15	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	1.3
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.4	1.3
17	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00	.35	1.2
18	.00	.00	.00	.00	.05	.00	.00	.00	.21	.00	.00	1.0
19	.00	.00	.00	.00	.01	.00	.00	125	.00	.00	.00	.92
20	.00	.00	.00	.00	.01	.00	.11	7.9	.00	.00	.00	.86
21	.00	.00	.00	.00	.01	.00	.02	10	9.2	.00	.00	4.3
22	.00	.00	.00	.00	.10	.00	.06	1.1	1.1	.00	.00	1.0
23	.00	.00	.00	.00	.56	.00	.00	.62	.35	.00	.00	13
24	.00	.00	.00	.00	.15	.00	.00	.29	2.8	.00	.00	5.2
25	.00	.00	.00	.00	.04	.00	.00	.10	.40	.00	.00	1.1
26	.00	.00	.00	.00	.00	.00	.04	.26	.20	.00	.00	.72
27	.00	.00	.00	.00	.02	.00	.01	1.8	.05	.00	.00	.56
28	.00	.00	.00	.00	.00	.17	.00	.50	.17	.00	9.0	.40
29	.00	.00	.00	.00	---	.02	.00	3.7	.02	.00	.56	.50
30	.00	.00	.00	.00	---	.00	.00	3.0	.01	.00	.15	.40
31	.00	---	.00	.00	---	.00	---	.94	---	.00	92	---
TOTAL	.00	.00	.00	.00	2.19	2.00	2.14	157.38	15.12	.10	106.48	355.58
MEAN	.000	.000	.000	.000	.078	.065	.071	5.08	.50	.003	3.43	11.9
MAX	.00	.00	.00	.00	.56	.56	1.1	125	9.2	.10	92	156
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07
AC-FT	.00	.00	.00	.00	4.3	4.0	4.2	312	30	.2	211	705

CAL YR 1976 TOTAL 228.24 MEAN .62 MAX 56 MIN .00 AC-FT 453
WTR YR 1977 TOTAL 640.99 MEAN 1.76 MAX 156 MIN .00 AC-FT 1270

06889120 SOLDIER CREEK NEAR BANCROFT, KS

LOCATION.--Lat 39°35'42", long 95°58'16", in NE¼NW¼NW¼ sec.28, T.5 S., R.13 E., Nemaha County, Hydrologic Unit 10270102, at downstream side of highway bridge, 4.0 mi (6.4 km) west of Bancroft, and at mile 68.7 (110.5 km).

DRAINAGE AREA.--10.5 mi² (27.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,239.50 ft (377.800 m) above mean sea level.

REMARKS.--Records good except those for December, January, February, and July, which are poor.

AVERAGE DISCHARGE.--13 years, 5.99 ft³/s (0.170 m³/s), 4,340 acre-ft/yr (5.35 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s (371 m³/s) May 10, 1970, gage height, 16.09 ft (4.904 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 19	2015	1,540	43.6	12.22	3.725	Sept. 4	1300	614	17.4	8.76	2.670
Aug. 31	2400	* 2,010	56.9	13.07	3.984	Sept. 12	1015	1,630	46.2	12.44	3.792
Sept. 2	0930	1,340	37.9	11.62	3.542	Sept. 12	2315	1,380	39.1	11.78	3.591

Minimum discharge, no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.05	.08	.01	.01	.30	.23	.17	1.3	.15	.00	151
2	.00	.05	.09	.01	.01	.45	.54	.15	.88	.12	.00	280
3	.00	.04	.11	.01	.01	.80	.28	.14	.70	.14	.00	18
4	.00	.04	.09	.01	.02	.50	3.3	.15	.55	.12	.16	159
5	.00	.04	.10	.01	.03	.70	1.6	.20	.37	.09	.18	22
6	.00	.03	.10	.01	.02	.40	.54	4.0	.32	.07	.88	6.2
7	.00	.04	.10	.01	.01	.32	.24	.36	.26	.05	.18	3.8
8	.00	.04	.11	.01	.00	.48	.21	.16	.25	.05	.11	2.5
9	.00	.04	.10	.01	.02	.55	.19	.11	.24	.05	.12	2.0
10	.00	.04	.11	.01	.10	.52	.17	.09	.23	.05	.11	1.3
11	.00	.04	.12	.01	.30	.85	.15	.09	.23	.08	.28	1.5
12	.00	.03	.11	.02	.50	.69	.13	.08	.77	.14	.18	565
13	.00	.02	.12	.01	.35	.37	.17	.08	.28	.13	.11	171
14	.00	.03	.11	.01	.25	.26	.19	.08	.25	.07	.08	12
15	.00	.06	.10	.01	.20	.21	.16	.06	.22	.05	.07	3.8
16	.00	.07	.10	.01	.20	.19	.15	.05	.22	.04	9.7	2.9
17	.00	.07	.10	.01	.30	.20	.14	.11	.27	.03	1.6	2.2
18	.00	.08	.11	.01	.45	.19	.14	.09	1.6	.02	.28	1.5
19	.00	.07	.12	.01	.40	.17	.14	445	.54	.01	.17	1.2
20	.00	.06	.10	.01	.30	.17	.36	61	.28	.00	.15	.98
21	.00	.07	.08	.01	.45	.17	.54	51	68	.00	.13	9.5
22	.00	.05	.06	.01	.60	.17	.46	4.6	12	.00	.13	1.2
23	.00	.06	.05	.01	.80	.17	.27	3.3	3.3	.00	.22	24
24	.01	.07	.06	.01	.70	.18	.18	2.0	10	.00	.17	23
25	.01	.07	.07	.02	.50	.17	.15	1.5	2.1	.00	.17	2.8
26	.02	.08	.10	.03	.35	.18	.15	1.2	.90	.00	.18	2.0
27	.05	.08	.06	.02	.25	.20	.14	7.9	.40	.00	.15	1.8
28	.04	.08	.03	.01	.20	.61	.15	2.0	.30	.00	32	1.6
29	.05	.05	.02	.01	---	.62	.13	16	.25	.00	2.2	1.6
30	.09	.05	.01	.01	---	.21	.16	18	.20	.00	.86	1.7
31	.07	---	.01	.01	---	.17	---	4.5	---	.00	250	---
TOTAL	.34	1.60	2.63	.36	7.33	11.17	11.36	624.17	107.21	1.46	300.57	1477.08
MEAN	.011	.053	.085	.012	.26	.36	.38	20.1	3.57	.047	9.70	49.2
MAX	.09	.08	.12	.03	.80	.85	3.3	445	68	.15	250	565
MIN	.00	.02	.01	.01	.00	.17	.13	.05	.20	.00	.00	.98
AC-FT	.7	3.2	5.2	.7	15	22	23	1240	213	2.9	596	2930

CAL YR 1976 TOTAL 1185.90 MEAN 3.24 MAX 210 MIN .00 AC-FT 2350
WTR YR 1977 TOTAL 2545.28 MEAN 6.97 MAX 565 MIN .00 AC-FT 5050

06889140 SOLDIER CREEK NEAR SOLDIER, KS

LOCATION.--Lat 39°33'57", long 95°57'45", in NW¼NE¼NE¼ sec.4, T.6 S., R.13 E., Jackson County, Hydrologic Unit 10270102, at downstream side of highway bridge, 2.0 mi (3.2 km) north of Soldier, and at mile 65.7 (105.7 km).

DRAINAGE AREA.--16.9 mi² (43.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,206.02 ft (367.595 m) above mean sea level.

REMARKS.--Records good except those for October, November, and January, which are poor.

AVERAGE DISCHARGE.--13 years, 9.13 ft³/s (0.259 m³/s), 6,610 acre-ft/yr (8.15 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s (331 m³/s) May 10, 1970, gage height, 16.46 ft (5.017 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in 1966-68, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 19	1015	1,540	43.6	6.94	2.115	Sept. 2	1015	1,720	48.7	7.24	2.207
May 19	2115	2,100	59.5	7.86	2.396	Sept. 4	1345	988	28.0	5.87	1.789
June 21	1730	1,340	37.9	6.57	2.003	Sept. 12	1015	1,880	53.2	7.50	2.286
Aug. 31	2115	* 2,740	77.6	8.92	2.719	Sept. 12	2245	2,340	66.3	8.27	2.521

Minimum discharge, 0.05 ft³/s (0.001 m³/s) July 17-23, Aug. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.21	.30	.13	.20	.62	.62	.48	1.8	.30	.10	271
2	.18	.22	.26	.16	.20	.71	.72	.48	1.2	.30	.10	381
3	.15	.22	.23	.18	.21	1.2	.87	.55	.90	.30	.08	27
4	.16	.21	.25	.21	.21	.94	2.6	.55	.77	.29	.20	272
5	.19	.20	.28	.21	.21	.58	1.8	.55	.60	.21	.34	32
6	.14	.19	.29	.19	.22	.59	1.2	11	.60	.14	2.3	9.1
7	.17	.18	.31	.19	.22	.66	.92	1.5	.60	.17	.37	5.3
8	.15	.18	.23	.19	.23	.73	.85	.71	.60	.28	.25	3.7
9	.16	.20	.25	.21	.46	.77	.62	.60	.60	.20	.25	2.9
10	.17	.18	.33	.25	.58	.77	.48	.47	.60	.20	.25	2.3
11	.19	.17	.29	.24	.62	.96	.40	.48	.58	.37	.33	2.0
12	.21	.16	.32	.20	1.3	.94	.32	.39	1.1	.43	.35	607
13	.19	.16	.28	.20	1.0	.76	.32	.25	.83	.28	.35	289
14	.21	.17	.25	.15	1.1	.55	.40	.25	.70	.16	.35	17
15	.19	.18	.36	.13	.70	.62	.40	.21	.60	.15	.35	7.9
16	.17	.19	.34	.15	.51	.51	.40	.20	.60	.10	12	6.1
17	.15	.20	.35	.17	.56	.47	.40	.31	.63	.09	2.4	4.3
18	.17	.24	.40	.18	.80	.55	.40	.37	2.4	.05	.84	3.3
19	.17	.22	.47	.19	1.0	.50	.40	748	.84	.05	.56	2.5
20	.15	.19	.30	.20	.80	.47	.62	112	.43	.05	.45	2.2
21	.19	.23	.14	.21	.82	.40	.92	92	155	.05	.45	11
22	.16	.25	.20	.23	1.1	.47	.85	6.3	18	.05	.48	3.5
23	.15	.27	.20	.24	1.7	.47	.70	2.9	7.2	.08	.68	14
24	.16	.26	.20	.25	1.3	.41	.62	2.0	8.1	.10	.60	38
25	.17	.24	.20	.25	1.2	.47	.48	1.3	1.5	.10	.60	3.4
26	.18	.21	.25	.25	.87	.47	.40	4.4	.67	.1	.57	2.0
27	.18	.20	.25	.25	.63	.47	.32	9.8	.39	.10	.45	1.8
28	.19	.22	.27	.24	.62	.71	.40	3.1	.32	.10	51	1.3
29	.19	.25	.40	.23	---	.94	.40	20	.30	.10	2.7	1.3
30	.21	.27	.24	.23	---	.72	.40	34	.30	.10	1.3	1.3
31	.20	---	.10	.21	---	.61	---	8.2	---	.10	357	---
TOTAL	5.45	6.27	8.54	6.32	19.37	20.04	20.23	1063.14	203.76	5.02	438.05	2025.2
MEAN	.18	.21	.28	.20	.69	.65	.67	34.3	6.79	.16	14.1	67.5
MAX	.21	.27	.47	.25	1.7	1.2	2.6	748	155	.43	357	607
MIN	.14	.16	.10	.13	.20	.40	.32	.20	.30	.05	.08	1.3
AC-FT	11	12	17	13	38	40	40	2110	404	10.0	869	4020

CAL YR 1976 TOTAL 1962.32 MEAN 5.36 MAX 321 MIN .05 AC-FT 3890
WTR YR 1977 TOTAL 3821.39 MEA 10.5 MAX 748 MIN .05 AC-FT 7580

06889160 SOLDIER CREEK NEAR CIRCLEVILLE, KS

LOCATION.--Lat 39°27'47", long 95°57'00", in NW¼NW¼NE¼ sec.10, T.7 S., R.13 E., Jackson County, Hydrologic Unit 10270102, 160 ft (49 m) downstream from bridge on State Highway 16, 5.8 mi (9.3 km) southwest of Circleville, and at mile 55.2 (88.8 km).

DRAINAGE AREA.--49.3 mi² (127.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,094.58 ft (333.628 m) above mean sea level.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--13 years, 29.9 ft³/s (0.847 m³/s), 21,660 acre-ft/yr (26.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,570 ft³/s (158 m³/s) May 10, 1970, gage height, 19.95 ft (6.081 m); minimum, 0.14 ft³/s (0.004 m³/s) Mar. 7, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 19	1230	3,370	95.4	14.74	4.493	Sept. 2	1245	1,540	43.6	9.80	2.987
May 19	2300	3,310	93.7	14.62	4.456	Sept. 4	1445	1,560	44.2	9.88	3.011
June 21	1945	2,770	78.4	13.42	4.090	Sept. 12	1215	2,140	60.6	11.79	3.594
Aug. 31	2400	3,160	89.5	14.32	4.365	Sept. 13	0245	* 5,080	144	17.69	5.392

Minimum discharge, 0.18 ft³/s (0.005 m³/s) Jan. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.45	.70	.20	.38	1.5	.95	.62	13	4.0	.38	695
2	.27	.40	.61	.20	.40	1.8	.93	.68	9.0	3.6	.38	366
3	.24	.38	.56	.22	.45	4.2	1.0	.73	6.0	3.6	.38	30
4	.24	.40	.67	.25	.48	2.8	3.2	.55	4.4	3.2	.70	417
5	.30	.45	.69	.25	.50	2.1	5.7	.59	3.1	2.6	.90	63
6	.32	.50	.74	.24	.50	2.0	2.4	18	2.1	2.2	4.0	18
7	.23	.51	.75	.20	.52	1.8	1.3	8.9	1.4	3.0	1.4	9.8
8	.19	.50	.53	.20	.53	1.9	.95	3.4	1.3	3.7	.70	5.8
9	.20	.59	.88	.21	.66	1.9	.83	2.0	1.2	2.3	.50	46
10	.26	.50	.54	.19	1.7	2.0	.74	1.3	1.1	1.8	.50	8.0
11	.30	.48	.44	.18	1.1	3.5	.61	1.1	.95	7.2	1.0	2.9
12	.40	.41	.46	.18	1.8	2.5	.50	.93	4.2	3.6	.90	1200
13	.35	.40	.44	.20	1.7	2.2	.50	.82	1.5	2.4	.70	1380
14	.40	.44	.47	.22	2.1	1.6	.54	.71	1.1	1.5	.65	69
15	.35	.46	.53	.23	1.9	1.3	.57	.63	.82	1.2	.65	38
16	.30	.46	.60	.22	1.6	1.0	.57	.57	.79	1.2	20	29
17	.25	.46	.67	.21	1.7	.99	.67	1.1	.67	1.2	8.0	24
18	.30	.46	.71	.22	1.8	.97	.85	1.0	1.7	1.1	2.0	21
19	.30	.51	.68	.25	1.9	.90	.83	1440	3.0	.83	1.1	18
20	.25	.70	.59	.30	2.1	.85	.85	552	1.0	.80	1.0	17
21	.35	.60	.47	.40	2.1	.83	1.3	281	400	.57	1.1	26
22	.28	.49	.50	.50	2.6	.73	1.3	33	45	.52	1.3	21
23	.25	.70	.50	.52	5.9	.71	1.0	19	8.0	.52	2.0	31
24	.28	.70	.50	.56	4.7	.71	.75	13	25	.57	1.5	85
25	.30	.60	.50	.58	4.9	.71	.61	9.2	15	.66	1.3	20
26	.30	.56	.53	.60	2.7	.71	.56	17	9.5	.66	1.1	17
27	.31	.50	.63	.64	1.8	.75	.50	27	7.3	.53	1.0	15
28	.31	.52	.66	.60	1.7	1.5	.46	23	6.0	.63	88	14
29	.31	.56	.59	.50	---	1.6	.43	16	5.0	1.1	9.9	14
30	.45	.59	.45	.45	---	1.1	.48	154	4.6	.55	2.6	14
31	.40	---	.30	.40	---	.99	---	41	---	.52	438	---
TOTAL	9.32	15.28	17.89	10.12	50.22	48.15	31.88	2668.83	584.53	57.86	593.64	4714.5
MEAN	.30	.51	.58	.33	1.79	1.55	1.06	86.1	19.5	1.87	19.1	157
MAX	.45	.70	.88	.64	5.9	4.2	5.7	1440	400	7.2	438	1380
MIN	.19	.38	.30	.18	.38	.71	.43	.55	.67	.52	.38	2.9
AC-FT	18	30	35	20	100	96	63	5290	1160	115	1180	9350

CAL YR 1976 TOTAL 4923.61 MEAN 13.5 MAX 850 MIN .19 AC-FT 9770
WTR YR 1977 TOTAL 8802.22 MEAN 24.1 MAX 1440 MIN .18 AC-FT 17460

06889100 SOLDIER CREEK NEAR ST. CLERE, KS

LOCATION.--Lat 39°22'33", long 95°55'05", in NW¼NE¼NW¼ sec.12, T.8 S., R.13 E., Jackson County, Hydrologic Unit 10270102, at upstream side of highway bridge, 7.8 mi (12.6 km) east of St. Clere, and at mile 44.5 (71.6 km).

DRAINAGE AREA.--80 mi² (207 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,023.04 ft (311.823 m) above mean sea level.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--13 years, 50.2 ft³/s (1.422 m³/s), 36,370 acre-ft/yr (44.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,430 ft³/s (239 m³/s) June 12, 1967, gage height, 21.41 ft (6.526 m); maximum gage height, 21.54 ft (6.565 m) Sept. 21, 1965; no flow for part of Apr. 9, 1964 (result of beaver activity upstream).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 20	0215	* 6,400	181	20.60	6.279	Sept. 4	1900	1,410	39.9	12.12	3.694
May 26	2400	1,400	39.6	unknown	unknown	Sept. 12	1100	2,940	83.3	17.35	5.288
June 21	unknown	3,100	87.8	unknown	unknown	Sept. 13	0700	* 6,400	181	20.60	6.279
Sept. 1	0130	4,420	125	19.61	5.977						

Minimum discharge observed, 0.42 ft³/s (0.0]2 m³/s) Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.0	1.3	.48	1.3	2.6	2.7	1.9	60	7.8	1.6	1660
2	.75	.87	1.4	.48	1.5	2.8	2.9	2.3	25	7.1	1.3	340
3	.55	.94	1.4	.50	1.5	5.3	2.9	2.9	14	7.0	1.2	63
4	.62	.89	1.5	.60	1.7	4.7	5.3	2.8	10	6.3	2.8	380
5	.56	.90	1.6	.70	1.8	3.5	7.1	9.2	8.0	5.5	7.6	131
6	.88	1.0	1.7	.65	1.9	3.0	6.8	113	6.5	4.9	28	25
7	.75	1.1	1.8	.60	1.8	2.9	4.9	19	5.5	8.2	8.7	13
8	.79	1.3	1.5	.60	1.8	2.9	3.5	9.0	5.0	71	3.7	7.6
9	.63	1.4	1.2	.70	1.7	3.0	3.2	5.8	4.5	15	2.8	35
10	.53	1.8	1.4	.68	1.9	3.2	2.8	4.3	4.2	6.8	2.5	7.2
11	.61	2.0	1.0	.65	2.0	4.6	2.6	3.2	10	25	2.3	1.4
12	1.1	1.1	1.0	.60	2.4	4.8	2.3	2.7	4.5	11	2.4	700
13	.76	1.1	1.0	.65	3.0	4.8	2.3	2.0	4.2	6.6	2.0	2900
14	.87	1.2	1.0	.70	3.5	3.9	2.3	2.0	4.5	5.4	2.0	175
15	.80	1.3	1.2	.70	3.0	3.3	2.3	1.9	4.2	4.7	1.9	107
16	.65	1.4	1.2	.65	2.5	2.6	2.1	1.7	3.8	4.3	81	81
17	.45	1.4	1.3	.68	2.2	2.6	2.0	3.9	60	3.9	20	66
18	.62	1.5	1.3	.70	2.5	2.7	2.1	2.9	35	3.4	6.5	55
19	.49	1.5	1.3	.70	2.6	2.6	2.4	1200	6.0	3.1	4.1	45
20	.42	1.5	.86	.75	3.0	2.5	2.6	1960	4.5	2.9	3.2	40
21	.64	1.5	.72	.85	3.0	2.5	3.7	300	500	2.9	2.9	45
22	.68	1.3	.70	.95	2.7	2.5	3.5	100	100	3.4	2.5	47
23	.69	1.7	.75	1.0	3.0	2.5	3.4	350	47	3.3	3.5	57
24	.75	1.6	.85	1.0	3.5	2.5	2.7	40	30	2.9	3.1	167
25	.70	1.4	.94	1.0	4.0	2.5	2.2	25	29	2.6	2.8	49
26	.70	1.4	1.0	1.1	4.6	2.5	1.9	60	18	2.3	2.6	34
27	.77	1.2	1.1	1.3	3.8	2.5	1.9	300	14	1.8	2.1	29
28	.90	1.1	1.1	1.4	2.9	3.5	1.8	45	12	1.7	151	26
29	.88	1.1	1.0	1.3	---	4.2	1.4	100	10	1.9	30	26
30	1.3	1.2	.59	1.3	---	3.5	1.6	450	8.7	1.9	8.3	25
31	.84	---	.51	1.2	---	2.8	---	150	---	1.7	460	---
TOTAL	22.68	38.70	34.42	25.09	71.1	99.8	89.2	5270.5	1048.1	236.3	854.4	7345.2
MEAN	.73	1.29	1.11	.81	2.54	3.22	2.97	170	34.9	7.62	27.6	245
MAX	1.3	2.0	1.7	1.4	4.6	5.3	7.1	1960	500	71	460	2900
MIN	.42	.87	.51	.48	1.3	2.5	1.4	1.7	3.8	1.7	1.2	1.4
AC-FT	45	77	68	50	141	198	177	10450	2080	469	1690	14570

CAL YR 1976 TOTAL 7604.31 MEAN 20.8 MAX 1270 MIN .11 AC-FT 15080
WTR YR 1977 TOTAL 15135.49 MEAN 41.5 MAX 2900 MIN .42 AC-FT 30020

06889200 SOLDIER CREEK NEAR DELIA, KS

LOCATION.--Lat 39°12'08", long 95°52'25", in NE¼NW¼NE¼ sec.8, T.10 S., R.14 E., Shawnee County, Hydrologic Unit 10270102, at upstream side of highway bridge, 5.1 mi (8.2 km) upstream from Walnut Creek, 5.5 mi (8.8 km) southeast of Delia, and at mile 21.9 (35.2 km).

DRAINAGE AREA.--157 mi² (407 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 931.34 ft (283.872 m) above mean sea level.

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--19 years, 88.9 ft³/s (2.518 m³/s), 64,410 acre-ft/yr (79.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,380 ft³/s (237 m³/s) Sept. 13, 1977, gage height, 21.75 ft (6.629 m); no flow Sept. 10-12, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1909, about 24 ft (7.3 m) June 21, 1951, from floodmarks and information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 20	1700	2,760	78.2	17.91	5.459
May 22	2330	1,770	50.1	14.68	4.474
May 30	2330	1,500	42.5	13.61	4.148
June 21	2300	1,780	50.4	14.73	4.490
June 22	1030	1,830	51.8	14.92	4.548
Sept. 1	2330	3,220	91.2	18.65	5.685
Sept. 13	0215	* 8,380	237	21.75	6.629

Minimum discharge, 0.22 ft³/s (0.006 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	3.4	1.3	1.4	1.1	4.3	3.3	1.9	140	5.6	2.4	2300
2	.70	3.5	1.3	1.3	1.2	4.1	2.7	1.3	126	5.2	2.1	833
3	.46	2.1	1.3	1.3	1.3	4.7	2.8	1.7	35	5.1	2.1	458
4	.58	1.4	1.3	1.4	1.3	5.5	4.8	2.9	20	5.0	2.2	317
5	.32	.70	1.4	1.4	1.3	6.5	4.9	17	13	4.5	5.5	609
6	.27	.70	1.9	1.3	1.4	5.3	7.9	309	8.9	4.1	6.3	146
7	.30	.81	2.1	1.2	1.5	4.7	8.2	52	7.0	3.9	15	64
8	.33	.98	1.9	1.3	1.5	4.3	7.0	18	6.4	4.0	5.5	37
9	.81	1.2	1.7	1.4	1.6	3.9	5.8	10	6.0	105	3.7	28
10	1.2	1.4	1.9	1.4	2.1	3.9	4.4	7.0	5.7	7.4	3.0	85
11	1.0	1.5	1.9	1.1	2.9	4.6	3.6	5.5	5.4	6.0	2.6	22
12	.46	1.4	1.9	1.0	3.5	6.2	2.7	4.5	7.3	26	2.6	3200
13	.46	2.0	1.9	1.2	4.1	7.2	2.1	3.7	5.5	6.4	2.6	7240
14	.50	2.1	1.9	1.3	4.5	7.2	1.8	3.3	5.7	4.8	2.5	2140
15	.34	2.1	2.0	1.1	4.1	6.2	2.2	2.7	5.1	4.1	2.6	305
16	.29	1.8	2.1	1.0	3.1	5.0	2.5	2.3	4.7	3.8	53	226
17	.31	1.8	2.2	.90	3.5	3.9	2.8	2.9	4.6	3.6	189	176
18	.33	1.9	2.5	.95	3.7	3.1	3.2	4.1	83	3.4	8.7	142
19	.31	1.9	2.6	1.0	3.9	2.4	3.5	197	84	3.2	5.8	113
20	.28	1.9	2.3	1.0	3.7	2.3	4.4	2230	6.9	3.0	4.1	93
21	.26	1.9	1.7	1.1	3.9	2.1	5.3	634	621	2.8	3.7	123
22	.26	1.9	1.6	1.2	4.1	1.8	5.5	990	1200	2.8	3.4	111
23	.67	1.9	1.4	1.3	4.9	1.7	5.3	1070	115	2.9	3.5	106
24	2.3	1.9	1.4	1.3	6.2	1.5	5.3	182	48	3.3	3.9	547
25	1.9	1.8	1.6	1.2	5.5	1.5	5.3	29	33	3.1	3.9	198
26	1.3	1.7	1.8	1.3	6.2	1.5	4.9	74	23	2.9	3.6	98
27	2.3	1.7	2.1	1.6	4.7	1.5	4.5	779	11	2.8	3.3	68
28	4.1	1.7	2.7	1.4	4.7	2.3	4.1	263	8.0	2.7	62	58
29	1.5	1.7	2.5	1.3	---	3.9	2.9	79	6.8	2.4	171	47
30	1.3	1.5	2.0	1.2	---	4.8	2.5	570	6.2	2.4	12	69
31	2.8	---	1.6	1.1	---	4.6	---	727	---	2.4	144	---
TOTAL	29.42	52.29	57.8	37.95	91.5	122.5	125.4	7741.8	2652.2	244.6	654.8	20091
MEAN	.95	1.74	1.86	1.22	3.27	3.95	4.18	250	88.4	7.89	21.1	670
MAX	4.1	3.5	2.7	1.6	6.2	7.2	8.2	2230	1200	105	171	7240
MIN	.26	.70	1.3	.90	1.1	1.5	1.8	1.3	4.6	2.4	2.1	22
AC-FT	58	104	115	75	181	243	249	15360	5260	485	1300	39850

CAL YR 1976 TOTAL 15339.48 MEAN 41.9 MAX 2560 MIN .00 AC-FT 30430
WTR YR 1977 TOTAL 31981.26 MEAN 87.4 MAX 7240 MIN .26 AC-FT 63280

06889500 SOLDIER CREEK NEAR TOPEKA, KS

LOCATION.--Lat 39°06'00", long 95°43'27", in SW¼NW¼NW¼ sec.14, T.11 S., R.15 E., Shawnee County, Hydrologic Unit 10270102, at downstream side of highway bridge, 1.5 mi (2.4 km) upstream from Halfday Creek, 4.0 mi (6.4 km) northwest of Topeka, and at mile 6.0 (9.7 km).

DRAINAGE AREA.--290 mi² (751 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1929 to September 1932, August 1935 to current year. Prior to October 1936, published as "at Topeka". Records for October 1932 to July 1935, published in WSP 746, 761, and 786, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1440: 1929-30(M), 1941-42, 1948(P), 1950. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 862.95 ft (263.027 m) above mean sea level. Prior to July 27, 1935, chain gage at site 2.0 mi (3.2 km) downstream at different datum. Aug. 1, 1935, to June 16, 1958, nonrecording gage and June 17, 1958, to May 24, 1960, water-stage recorder, at present site and datum 4.0 ft (1.22 m) higher. May 25, 1960, to June 8, 1961, nonrecording gage at site 1.1 mi (1.8 km) downstream at datum 1.79 ft (0.546 m) lower.

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--45 years (water years 1930-32, 1936-77), 137 ft³/s (3.880 m³/s), 99,260 acre-ft/yr (122 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,900 ft³/s (620 m³/s) Sept. 13, 1977, gage height, 21.31 ft (6.495 m), from rating curve extended above 12,000 ft³/s (340 m³/s); maximum gage height, 29.06 ft (8.857 m) July 12, 1951, datum then in use, from floodmark, backwater from Kansas River; no flow at times in 1931, 1935-40, 1953-57, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 23	0600	4,410	125	11.26	3.432	June 21	2300	4,500	127	11.38	3.469
June 19	0830	3,600	102	10.14	3.091	Sept. 1	0600	5,190	147	12.19	3.716
June 21	0630	3,000	85.0	9.28	2.829	Sept. 13	1230	*21,900	620	21.31	6.495

Minimum daily discharge, 1.4 ft³/s (0.040 m³/s) Oct. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.4	3.5	3.3	1.5	7.5	6.8	8.0	285	37	4.8	4090
2	3.1	4.2	3.8	3.3	1.6	7.9	5.9	8.0	238	32	5.3	1770
3	2.5	4.1	3.6	3.1	1.6	9.2	4.9	8.0	115	29	4.2	577
4	2.8	4.1	3.9	3.3	1.9	8.7	6.3	16	73	25	8.1	816
5	3.3	3.6	5.0	3.0	2.3	8.5	6.6	14	53	22	60	1050
6	2.6	3.5	4.7	3.0	2.2	8.2	5.8	415	40	18	72	318
7	2.4	3.4	4.0	.0	2.1	8.2	9.2	173	34	15	50	178
8	2.3	3.1	4.5	2.8	2.4	7.7	11	57	29	15	36	129
9	2.0	2.9	6.0	2.7	3.1	7.2	9.9	33	27	83	17	100
10	1.9	2.9	6.4	2.4	4.5	6.4	7.4	23	24	67	13	120
11	1.7	2.9	6.0	2.4	6.0	14	5.8	16	23	41	11	84
12	1.7	2.9	6.0	2.4	7.0	13	4.8	12	368	54	8.2	4420
13	1.7	2.7	6.0	3.0	7.5	12	5.0	9.7	57	40	11	17200
14	1.6	3.2	5.2	2.6	8.0	12	4.9	8.3	32	21	12	4520
15	1.6	4.0	4.5	2.3	7.0	10	4.7	6.9	26	14	9.4	485
16	1.5	4.5	4.3	2.2	5.5	8.4	4.7	8.7	22	12	48	319
17	1.5	5.0	4.5	2.1	6.0	7.9	4.7	11	32	9.8	219	242
18	1.4	5.2	4.3	2.3	6.5	6.7	4.8	9.1	276	8.8	80	186
19	1.4	4.5	4.3	2.7	6.0	5.4	6.3	83	1960	8.3	32	143
20	1.6	4.4	4.0	2.5	8.0	4.6	8.1	2430	249	7.7	24	118
21	1.6	3.8	3.5	2.4	11	4.5	10	999	1070	6.9	19	121
22	1.7	3.6	3.2	2.3	13	4.4	10	613	2470	8.4	14	139
23	3.2	3.8	3.5	2.4	18	4.4	10	2750	413	6.9	16	113
24	3.2	3.5	3.7	2.4	16	4.1	10	283	519	6.5	16	730
25	2.9	3.5	4.0	2.2	16	3.8	8.6	111	931	8.5	14	288
26	3.2	3.5	4.5	2.0	14	3.8	8.1	84	182	7.4	12	121
27	5.0	3.3	5.5	2.7	11	4.0	7.7	815	98	6.4	12	83
28	4.2	3.1	4.8	2.2	8.5	6.4	7.3	518	76	6.4	27	62
29	4.5	2.8	4.0	1.9	---	6.9	6.2	154	59	7.1	262	56
30	7.0	3.0	3.7	1.7	---	6.0	7.5	1120	46	5.4	101	56
31	6.0	---	3.5	1.5	---	6.3	---	1330	---	5.2	73	---
TOTAL	84.8	109.4	138.4	78.1	198.2	228.1	213.0	12126.7	9827	634.7	1291.0	38634
MEAN	2.74	3.65	4.46	2.52	7.08	7.36	7.10	391	328	20.5	41.6	1288
MAX	7.0	5.2	6.4	3.3	18	14	11	2750	2470	83	262	17200
MIN	1.4	2.7	3.2	1.5	1.5	3.8	4.7	6.9	22	5.2	4.2	56
AC-FT	168	217	275	155	393	452	422	24050	19490	1260	2560	76630

CAL YR 1976 TOTAL 21141.4 MEAN 57.8 MAX 3340 MIN 1.1 AC-FT 41930
WTR YR 1977 TOTAL 63563.4 MEAN 174 MAX 17200 MIN 1.4 AC-FT 126100

06890100 DELAWARE RIVER NEAR MUSCOTAH, KS

LOCATION.--Lat 39°31'17", long 95°31'57", in SW¼SW¼SW¼ sec.16, T.6 S., R.17 E., Atchison County, Hydrologic Unit 10270103, 2.0 mi (3.2 km) south of Muscotah, and at mile 45.5 (73.2 km).

DRAINAGE AREA.--431 mi² (1,116 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements water years 1964-67. July 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 920.88 ft (280.684 m) above mean sea level (Kansas Geological Survey bench mark).

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--8 years, 260 ft³/s (7.363 m³/s), 188,400 acre-ft/yr (232 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Sept. 13, 1977, gage height, 30.83 ft (9.397 m); minimum, 0.38 ft³/s (0.011 m³/s) Sept. 7, 8, 11, 12, 1976, May 12, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1925 reached a stage of 36.5 ft (11.13 m), from information by local residents (discharge not determined). Floods in 1951 and 1967 were lower than the flood of 1925.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 20	1600	13,400	379	26.98	8.224	Sept. 4	0200	9,090	257	23.79	7.251
May 30	0100	3,760	106	15.52	4.730	Sept. 5	0300	4,180	118	16.37	4.990
Aug. 28	1700	3,210	90.9	14.42	4.395	Sept. 13	0900	*28,000	793	30.83	9.397
Sept. 1	0300	15,200	430	28.08	8.559	Sept. 15	2000	2,800	79.3	13.58	4.139
Sept. 2	2100	4,900	139	17.80	5.425	Sept. 24	0600	6,220	176	20.17	6.148

Minimum discharge, 0.38 ft³/s (0.011 m³/s) May 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	7.1	4.6	3.8	1.8	16	12	5.8	129	14	2.6	9000
2	2.2	4.8	4.7	3.8	1.7	16	12	6.4	90	12	2.4	3110
3	1.9	3.6	5.0	3.8	1.8	17	12	7.0	67	11	2.1	3890
4	2.0	3.8	5.0	3.7	2.0	19	24	7.4	55	10	2.4	3790
5	3.1	3.6	4.8	3.7	2.0	17	61	6.0	46	8.8	4.5	2130
6	2.9	3.3	4.5	3.6	2.1	16	53	57	38	7.6	557	532
7	2.2	2.5	4.1	3.6	2.1	16	29	23	33	8.8	128	301
8	2.3	2.6	4.5	3.5	2.1	16	19	16	28	64	38	197
9	2.0	3.0	4.8	3.4	2.2	16	14	9.9	25	27	21	143
10	1.7	3.1	5.2	3.3	2.3	13	11	7.0	23	13	23	117
11	1.7	3.4	5.6	3.1	2.6	65	8.6	4.3	21	221	74	100
12	1.6	3.5	6.0	3.0	4.5	65	6.5	.66	20	118	197	14000
13	1.5	3.7	6.2	3.3	7.0	47	6.9	2.9	22	42	43	21000
14	1.4	3.5	6.0	3.1	7.6	31	6.9	2.8	22	22	20	3520
15	1.1	4.0	5.6	2.9	6.6	22	6.6	2.4	18	13	12	1910
16	1.0	4.0	5.2	2.7	10	17	8.1	3.1	17	10	294	1540
17	1.0	5.3	5.0	2.5	12	14	7.4	4.1	17	6.5	271	914
18	1.2	7.1	4.8	2.7	11	13	10	4.6	24	5.1	62	652
19	1.7	7.3	4.6	3.0	13	12	12	1070	27	4.2	29	402
20	2.0	7.2	4.4	2.8	18	11	12	10800	23	3.5	19	352
21	2.0	6.7	4.0	2.7	23	10	66	1020	152	3.1	13	728
22	1.9	6.0	3.5	2.7	28	9.8	34	506	691	3.2	10	615
23	3.3	5.2	3.7	2.6	30	8.9	25	189	111	3.8	11	486
24	3.0	5.8	4.0	2.6	27	8.0	16	119	709	3.6	12	3350
25	3.6	6.4	4.5	2.6	25	7.9	11	93	302	3.3	11	508
26	3.6	5.8	5.0	2.6	20	8.0	8.8	75	141	3.3	10	272
27	3.9	5.2	5.6	3.0	18	8.5	6.5	71	68	3.3	8.5	188
28	4.8	4.5	5.2	2.6	16	11	5.1	91	35	3.2	1890	151
29	4.3	4.0	4.7	2.4	---	16	4.3	539	24	4.4	456	139
30	6.5	4.3	4.2	2.2	---	17	4.3	1050	16	3.7	106	132
31	7.6	---	3.9	2.0	---	14	---	221	---	3.0	1160	---
TOTAL	81.4	140.3	148.9	93.3	298.4	578.1	513.0	16014.36	2994	659.4	5489.5	74229
MEAN	2.63	4.68	4.80	3.01	10.7	18.6	17.1	517	99.8	21.3	177	2474
MAX	7.6	7.3	6.2	3.8	30	65	66	10800	709	221	1890	21000
MIN	1.0	2.5	3.5	2.0	1.7	7.9	4.3	.66	16	3.0	2.1	100
AC-FT	161	278	295	185	592	1150	1020	31760	5940	1310	10890	147200

CAL YR 1976 TOTAL 33384.93 MEAN 91.2 MAX 3940 MIN .41 AC-FT 66220
WTR YR 1977 TOTAL 101239.66 MEAN 277 MAX 21000 MIN .66 AC-FT 200800

06890898 PERRY LAKE NEAR PERRY, KS

LOCATION.--Lat 39°06'52", long 95°25'33", in NE¼NW¼NW¼ sec.9, T.11 S., R.18 E., Jefferson County, Hydrologic Unit 10270103, in control tower near center of dam on Delaware River, 4.5 mi (7.2 km) northwest of Perry and 5.8 mi (9.3 km) above mouth.

DRAINAGE AREA.--1,117 mi² (2,893 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--March 1969 to current year. Prior to October 1971, published as "Perry Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by compacted earthfill dam. Some temporary storage occurred in Feb. 1969; dam was closed Mar. 21, 1969. Total capacity, 801,300 acre-ft (988 hm³), consisting of the following: Dead storage, 250 acre-ft (0.31 hm³) below elevation 833.0 ft (253.9 m) (invert of intake tube); conservation pool, 243,000 acre-ft (300 hm³) between elevations 833.0 ft (253.9 m) and 891.5 ft (271.73 m); flood control pool, 521,900 acre-ft (644 hm³) between elevations 891.5 ft (271.7 m) and 920.6 ft (280.6 m); and uncontrolled storage, 36,160 acre-ft (44.5 hm³) between elevations 920.6 ft (280.6 m) and 922.0 ft (281.0 m). Reservoir is used to store water for flood control, irrigation, and recreation. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 917.07 ft (279.523 m) Oct. 19, 1973, contents, 679,700 acre-ft (838 hm³); minimum since conservation pool was first filled, 880.01 ft (268.23 m) May 12, 13, 1969, contents, 126,000 acre-ft (155 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 907.24 ft (276.527 m) Sept. 15, contents, 478,400 acre-ft (590 hm³); minimum, 887.68 ft (270.565 m) Mar. 2, contents, 199,100 acre-ft (245 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Computed by Corps of Engineers in 1960 from topographic maps)

885	171,200	900	358,700
890	225,300	905	438,900
895	287,900	910	530,100

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	888.90	888.52	888.16	887.90	887.77	887.73	887.80	887.85	893.68	894.37	890.30	893.98
2	888.89	888.53	888.16	887.90	887.77	887.74	887.81	887.89	893.70	894.23	890.28	896.00
3	888.84	888.52	888.15	887.90	887.76	887.79	887.87	887.88	893.71	894.12	890.25	896.43
4	888.90	888.50	888.14	887.90	887.75	887.79	887.90	887.93	893.71	893.98	890.28	897.08
5	888.87	888.45	888.15	887.90	887.75	887.78	887.82	888.47	893.73	893.79	890.83	897.16
6	888.85	888.45	888.15	887.90	887.75	887.77	887.82	888.88	893.77	893.57	891.28	896.76
7	888.83	888.44	888.15	887.90	887.74	887.76	887.83	888.91	893.74	893.43	891.34	896.31
8	888.78	888.41	888.11	887.89	887.73	887.75	887.81	888.93	893.69	893.27	891.36	895.78
9	888.78	888.41	888.10	887.88	887.73	887.73	887.79	888.93	893.68	893.05	891.35	895.28
10	888.75	888.40	888.11	887.87	887.74	887.78	887.75	888.90	893.65	892.78	891.32	894.75
11	888.72	888.38	888.08	887.87	887.75	887.88	887.78	888.88	893.67	892.67	891.24	894.17
12	888.72	888.38	888.08	887.85	887.73	887.95	887.76	888.87	893.72	892.49	891.18	897.37
13	888.72	888.36	888.06	887.85	887.71	887.93	887.77	888.86	893.72	892.25	891.15	901.92
14	888.69	888.34	888.06	887.85	887.71	887.94	887.73	888.85	893.70	892.00	891.13	906.52
15	888.66	888.33	888.05	887.83	887.71	887.93	887.76	888.85	893.68	891.76	891.05	906.28
16	888.63	888.31	888.05	887.83	887.70	887.92	887.75	888.83	893.67	891.48	891.30	905.22
17	888.58	888.31	888.05	887.82	887.70	887.95	887.78	888.85	893.75	891.23	891.35	904.02
18	888.58	888.30	888.05	887.82	887.69	887.90	887.77	888.85	893.92	890.96	891.31	902.79
19	888.56	888.30	888.11	887.82	887.70	887.90	887.77	889.05	894.23	890.71	891.24	901.43
20	888.53	888.30	888.04	887.82	887.70	887.88	887.88	890.79	894.25	890.56	891.14	900.12
21	888.52	888.28	888.00	887.82	887.70	887.87	887.90	891.68	894.53	890.55	891.09	898.87
22	888.43	888.26	887.99	887.82	887.73	887.87	887.91	892.05	894.86	890.55	891.02	897.43
23	888.55	888.25	887.98	887.82	887.78	887.84	887.90	892.62	894.86	890.50	890.98	896.81
24	888.54	888.24	887.98	887.82	887.78	887.81	887.90	892.68	894.95	890.53	890.89	897.17
25	888.52	888.24	887.97	887.82	887.80	887.79	887.89	892.72	894.96	890.48	890.73	896.91
26	888.51	888.33	887.96	887.82	887.76	887.81	887.87	892.73	894.89	890.45	890.64	896.56
27	888.52	888.24	887.96	887.82	887.77	887.84	887.85	892.76	894.72	890.41	890.76	896.18
28	888.52	888.20	887.95	887.81	887.77	887.85	887.87	892.80	894.70	890.34	891.17	895.79
29	888.49	888.19	887.93	887.80	---	887.85	887.86	892.86	894.59	890.37	891.41	895.38
30	888.55	888.17	887.92	887.79	---	887.83	887.85	893.40	894.51	890.35	891.39	895.00
31	888.55	---	887.91	887.78	---	887.79	---	893.52	---	890.32	891.63	---
MEAN	888.66	888.34	888.05	887.85	887.74	887.84	887.83	890.16	894.10	891.86	891.04	898.18
MAX	888.90	888.53	888.16	887.90	887.80	887.95	887.91	893.52	894.96	894.37	891.63	906.52
MIN	888.43	888.17	887.91	887.78	887.69	887.73	887.73	887.85	893.65	890.32	890.25	893.98
(+)	208,700	204,500	201,600	200,200	200,100	200,300	200,900	268,500	281,400	229,000	244,800	287,900
(♦)	-3,900	-4,200	-2,900	-1,400	-100	+200	+600	+67,600	+12,900	-52,400	+15,800	+43,100

CAL YR 1976 .... (♦) -30,200
WTR YR 1977 .... (♦) +75,300

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
♦ CHANGE IN CONTENTS, IN ACRE-FEET.

06890900 DELAWARE RIVER BELOW PERRY DAM, KS

LOCATION.--Lat 39°06'51", long 95°25'33", in NE¼NW¼NW¼ sec.9, T.11 S., R.18 E., Jefferson County, Hydrologic Unit 10270103, at outlet structure of Perry Dam, 4.5 mi (7.2 km) northwest of Perry and 5.8 mi (9.3 km) above mouth.

DRAINAGE AREA.--1,117 mi² (2,893 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1969 to current year.

GAGE.--Water-stage recorders for reservoir elevations and gated outflow structure.

REMARKS.--Records fair. Flow completely regulated by Perry Lake (see sta 06890898). Discharge computed from relation between discharge, head, and gate openings.

COOPERATION.--Reservoir elevation-discharge ratings for reservoir outflow gates and gate operation logs furnished by Corps of Engineers.

AVERAGE DISCHARGE.--8 years, 631 ft³/s (17.87 m³/s), 457,200 acre-ft/yr (564 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft³/s (337 m³/s) Sept. 15, 1977; no flow for parts of many days in 1970-73.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,900 ft³/s (337 m³/s) Sept. 15; no flow part of day Dec. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	32	32	34	35	38	41	38	39	744	25	472
2	32	32	32	34	35	38	41	38	39	743	25	2070
3	32	32	32	34	35	38	41	38	39	743	25	3700
4	32	32	32	34	35	38	41	38	39	742	25	3720
5	32	32	32	34	35	38	41	38	39	1000	25	3740
6	32	32	32	34	35	38	41	38	39	1270	25	3720
7	32	32	26	34	35	38	41	38	39	1270	25	3720
8	32	32	34	34	35	38	41	38	39	1260	25	3700
9	32	32	34	34	35	38	41	38	39	1390	189	3680
10	32	32	34	34	35	38	41	38	39	1470	306	3660
11	32	32	34	34	35	38	41	38	39	1470	306	3660
12	32	32	34	34	35	38	41	38	39	1470	306	1850
13	32	32	34	34	35	38	41	38	39	1460	306	29
14	32	32	34	34	35	38	41	38	39	1460	306	1560
15	32	32	34	34	35	38	41	38	39	1460	306	7150
16	32	32	34	34	35	38	39	38	39	1450	306	11800
17	32	32	34	34	35	38	38	38	39	1450	306	11700
18	32	32	34	34	36	38	38	38	39	1450	306	11600
19	32	32	34	34	38	38	38	38	39	1440	306	11400
20	32	32	34	34	38	38	38	39	39	810	465	11200
21	32	32	34	34	38	38	38	39	39	25	465	11100
22	32	32	34	34	38	38	38	39	314	25	465	11000
23	32	32	34	34	38	39	38	39	736	25	465	7650
24	32	32	34	35	38	41	38	39	736	25	496	3000
25	32	32	34	35	38	41	38	39	735	25	515	3000
26	32	32	34	35	38	41	38	39	736	25	319	3000
27	32	32	34	35	38	41	38	39	737	25	29	2980
28	32	32	34	35	38	41	38	39	737	25	29	2980
29	32	32	34	35	---	41	38	39	738	25	174	2960
30	32	32	34	35	---	41	38	39	738	25	466	2960
31	32	---	34	35	---	41	---	39	---	25	466	---
TOTAL	992	960	1034	1062	1011	1203	1186	1190	7026	24827	7883	154761
MEAN	32.0	32.0	33.4	34.3	36.1	38.8	39.5	38.4	234	801	254	5159
MAX	32	32	34	35	38	41	41	39	738	1470	515	11800
MIN	32	32	26	34	35	38	38	38	39	25	25	29
AC-FT	1970	1900	2050	2110	2010	2390	2350	2360	13940	49240	15640	307000

CAL YR 1976 TOTAL 82664 MEAN 226 MAX 2940 MIN 26 AC-FT 164000
WTR YR 1977 TOTAL 203135 MEAN 557 MAX 11800 MIN 25 AC-FT 402900

06891000 KANSAS RIVER AT LECOMPTON, KS

LOCATION.--Lat 39°03'07", long 95°23'15", in SE¼SW¼NW¼ sec.35, T.11 S., R.18 E., Jefferson County, Hydrologic Unit 10270104, on left bank at upstream side of highway bridge at Lecompton, 0.8 mi (1.3 km) downstream from Delaware River, and at mile 63.8 (102.7 km).

DRAINAGE AREA.--58,460 mi² (151,410 km²), approximately, of which a large area is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January to November 1896 and April to July 1906 (gage heights only), March 1936 to current year. Records for April 1899 to December 1905 published in WSP 37, 39, 50, 52, 66, 75, 84, 99, 131, 172, and 796-B have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 876: 1937. WSP 1176: 1903(M). WSP 1440: 1948-49(P). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 821.84 ft (250.497 m) above mean sea level. Prior to July 30, 1952, nonrecording gage, and July 30, 1952, to Apr. 29, 1970, recording gage, at site 0.15 mi (0.24 km) upstream at same datum.

REMARKS.--Records good except those for winter periods, which are poor. Natural flow of stream affected by lakes and reservoirs in Colorado, Nebraska, and Kansas and by numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--41 years (1936-77), 6,924 ft³/s (196.1 m³/s), 5,016,000 acre-ft/yr (6.18 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 483,000 ft³/s (13,700 m³/s) July 13, 1951, gage height, 30.23 ft (9.214 m); from rating curve extended above 120,000 ft³/s (3,400 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 185 ft³/s (5.24 m³/s) Oct. 13, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1844, 30.23 ft (9.214 m) July 13, 1951.
Flood of May 31, 1903 (second highest since 1844), reached a stage of 27.9 ft (8.50 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	0600	15,100	428	7.61	2.320	Aug. 29	1800	15,600	442	8.06	2.457
June 2	0500	21,600	612	9.15	2.789	Sept. 1	1100	43,400	1,230	12.91	3.935
June 19	1500	57,200	1,620	14.89	4.538	Sept. 13	2100	*60,200	1,700	15.27	4.654
June 22	1100	39,200	1,110	12.31	3.752	Sept. 18	0600	25,700	728	10.32	3.146
June 25	1300	36,600	1,040	11.94	3.639						

Minimum daily discharge, 680 ft³/s (19.3 m³/s) Jan. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	1140	790	750	760	925	970	971	17100	13100	2520	38900
2	1020	1110	830	750	800	925	1000	976	20100	10100	2420	31800
3	1020	1060	930	750	800	952	1000	942	15200	8300	2400	23000
4	1000	1040	980	780	800	971	1050	924	12800	7080	2480	25900
5	1050	1020	1020	760	830	968	1030	968	13600	7480	4490	25800
6	1040	1000	1020	750	830	953	1020	1540	11600	8600	3500	21000
7	1080	985	1020	720	840	943	1030	1470	8860	8050	3200	17900
8	1110	985	1020	720	840	926	1010	993	7140	7320	3000	17200
9	1140	985	915	680	860	920	982	950	6320	6980	3160	17100
10	2020	985	925	720	880	913	951	933	5370	7550	3700	16400
11	2810	985	935	750	984	1100	931	892	4060	6220	3940	15800
12	2770	985	970	730	949	1030	988	903	4800	5480	3260	16800
13	2270	985	990	730	1020	954	895	925	5030	5420	3040	48800
14	1680	995	995	720	1190	936	891	907	4160	5010	3180	41600
15	1390	995	1040	760	1220	911	872	875	2820	4540	2960	18700
16	1250	995	1090	760	1210	895	855	883	2470	4120	3260	24700
17	1100	995	1220	730	1200	895	835	996	3170	3920	3220	24800
18	1060	985	1270	730	1330	890	840	981	9120	4470	4080	25400
19	1040	975	1180	770	1290	850	850	918	46200	4780	6800	24600
20	1020	965	1060	800	1100	850	887	6640	44100	4310	9360	23500
21	1020	995	933	870	1020	880	927	13700	32100	3360	10100	23300
22	1020	1000	937	900	985	860	905	9750	36500	3180	10600	22700
23	1150	995	861	930	1010	870	939	8990	25700	3160	11600	17800
24	1140	985	916	930	983	850	1010	8080	23300	3100	12600	13200
25	1080	995	920	950	958	850	995	5260	34200	2940	12700	12600
26	1040	1000	920	950	955	860	975	4340	24700	2880	11800	11900
27	1150	995	900	1000	950	880	980	4140	20800	2800	8600	11600
28	1120	900	920	1000	933	880	973	4620	17000	2800	9030	11400
29	1110	770	840	900	---	930	950	4720	15500	2800	12200	11300
30	1190	790	800	800	---	1000	959	5650	14100	2780	12700	11300
31	1200	---	750	730	---	1050	---	15200	---	2700	18600	---
TOTAL	40140	29595	29897	24820	27447	28617	28420	110037	487920	165330	204500	646800
MEAN	1295	987	964	801	980	923	947	3550	16260	5333	6597	21560
MAX	2810	1140	1270	1000	1330	1100	1050	15200	46200	13100	18600	48800
MIN	1000	770	750	680	760	850	835	875	2470	2700	2400	11300
AC-FT	79620	58700	59300	49230	54440	56760	56370	218300	967800	327900	405600	1283000

CAL YR 1976 TOTAL 1221527 MEAN 3338 MAX 30600 MIN 750 AC-FT 2423000
WTR YR 1977 TOTAL 1823523 MEAN 4996 MAX 48800 MIN 680 AC-FT 3617000

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958, 1962 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
OCT 26...	1150	958	8.2	9.0	--	80	10.0	19	15000	67
NOV 22...	1010	1200	8.4	6.0	--	10	12.7	32	4900	84
DEC 20...	1100	1260	8.1	1.0	--	24	11.9	16	8000	100
JAN 24...	750	1250	8.1	1.0	--	9.2	10.4	7	5900	100
FEB 22...	900	1200	8.3	8.0	--	21	10.7	13	1400	100
MAR 21...	895	1220	8.1	8.0	--	--	11.8	52	540	78
APR 25...	1110	1110	8.2	15.0	--	65	9.8	49	87300	82
MAY 23...	10000	350	7.8	19.5	--	1800	6.0	290	33000	98
JUN 24...	23800	375	7.8	24.0	--	500	7.1	71	2500	71
JUL 25...	3500	630	8.5	28.0	30	--	7.1	32	2100	63
AUG 22...	11400	485	8.2	25.5	--	90	6.3	28	1600	60
SEP 26...	12000	340	8.2	23.5	160	--	6.7	27	--	36

B Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT 26...	9.3	44	4.1	250	0	205	2.5	140	110	565
NOV 22...	20	120	7.4	250	4	212	1.6	170	150	698
DEC 20...	240	130	7.4	290	0	238	3.7	180	150	735
JAN 24...	23	130	7.0	310	0	254	3.9	170	140	744
FEB 22...	22	120	7.0	240	0	197	1.9	180	130	737
MAR 21...	22	140	.4	240	0	197	3.1	180	170	734
APR 25...	22	110	7.5	220	0	180	2.2	170	150	660
MAY 23...	28	21	16	110	0	90	2.8	42	25	219
JUN 24...	20	22	14	150	0	123	3.8	47	21	230
JUL 25...	17	63	9.4	180	0	148	.9	100	65	401
AUG 22...	13	31	8.7	330	0	271	3.3	64	33	301
SEP 26...	9.6	18	7.5	140	0	115	1.4	36	19	217

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL NITROGEN (NO3) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT 26...	.77	1750	658	1.3	.27	1.1	1.4	2.7	12	.49
NOV 22...	.95	1900	711	.18	.35	.00	.21	.39	1.7	.35
DEC 20...	1.00	2180	790	.64	.68	.52	1.2	1.8	8.1	.35
JAN 24...	1.01	1510	770	.67	1.1	.20	1.3	2.0	8.7	.54
FEB 22...	1.00	1790	787	.60	.61	.49	1.1	1.7	7.5	.55
MAR 21...	1.00	1770	766	.08	.12	.82	.94	1.0	4.5	.27
APR 25...	.90	1980	758	.03	.01	1.8	1.8	1.8	8.1	.32
MAY 23...	.30	5910	4330	1.1	.06	5.4	5.5	6.6	29	1.3
JUN 24...	.31	14800	1840	.67	.04	2.2	2.2	2.9	13	.80
JUL 25...	.55	3790	520	.01	.00	.97	.97	.98	4.3	.17
AUG 22...	.41	9270	632	1.1	.01	1.5	1.5	2.6	12	.35
SEP 26...	.30	7030	472	.99	.10	.60	.70	1.7	7.5	.31

06891000 KANSAS RIVER AT LECOMPTON, KS--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	SAMP-LING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
OCT										
17...	1205	2.5	2.9	1210	1.4	--	98	100	--	--
17...	1225	1.1	1.5	1315	1.8	--	97	100	--	--
17...	1250	.6	1.0	1405	1.7	--	97	100	--	--
NOV										
14...	1055	2.5	2.9	1180	1.3	--	77	100	--	--
14...	1120	1.3	1.7	1265	1.5	--	82	100	--	--
14...	1140	.7	1.1	1390	2.2	--	90	100	--	--
DEC										
11...	1105	2.9	3.3	1180	.7	--	97	100	--	--
11...	1125	1.7	2.1	1330	2.1	--	98	100	--	--
11...	1145	1.0	1.4	1450	2.3	--	98	100	--	--
FEB										
19...	1015	1.7	2.1	1040	2.4	--	93	100	--	--
19...	1045	2.3	2.7	1200	1.4	--	91	100	--	--
19...	1110	1.7	2.1	1405	2.4	--	93	100	--	--
MAR										
11...	1330	1.6	2.0	1030	2.6	--	97	100	--	--
11...	1405	2.5	2.9	1270	2.1	--	95	100	--	--
11...	1430	1.6	2.0	1410	2.5	--	98	100	--	--
APR										
20...	1040	1.7	2.1	910	2.8	58	95	95	100	--
20...	1110	4.0	4.4	1100	2.2	57	99	100	--	--
20...	1115	3.4	4.4	1100	2.1	55	99	100	--	--
20...	1120	2.9	4.4	1100	2.2	54	98	100	--	--
20...	1125	2.2	4.4	1100	2.5	58	95	100	--	--
20...	1130	1.0	4.4	1100	2.4	60	96	100	--	--
20...	1200	5.1	5.5	1300	2.3	53	98	99	100	--
20...	1210	4.5	5.5	1300	1.5	55	93	95	98	100
20...	1215	4.2	5.5	1300	1.4	55	95	98	99	100
20...	1220	3.6	5.5	1300	1.8	59	95	97	99	100
20...	1225	2.7	5.5	1300	2.2	56	95	100	--	--
20...	1230	1.3	5.5	1300	3.0	59	95	100	--	--
MAY										
13...	1250	3.7	4.1	890	3.1	--	85	100	--	--
13...	1300	.9	4.1	890	2.6	--	83	100	--	--
13...	1305	2.0	4.1	890	2.4	--	57	100	--	--
13...	1310	2.7	4.1	890	2.7	--	73	100	--	--
13...	1315	3.1	4.1	890	2.4	--	64	100	--	--
13...	1320	3.3	4.1	890	2.6	--	67	100	--	--
13...	1330	3.8	4.2	1100	2.6	--	93	100	--	--
13...	1335	1.0	4.2	1100	2.9	--	93	100	--	--
13...	1340	2.1	4.2	1100	2.6	--	93	100	--	--
13...	1345	2.8	4.2	1100	2.5	--	94	100	--	--
13...	1350	3.2	4.2	1100	2.4	--	91	100	--	--
13...	1355	3.5	4.2	1100	2.4	--	90	100	--	--

DATE	TIME	SAMP-LING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
MAY							
13...	1420	4.6	5.0	1410	2.8	92	100
13...	1430	1.2	5.0	1410	3.1	92	100
13...	1435	2.5	5.0	1410	2.7	90	100
13...	1440	3.3	5.0	1410	2.7	91	100
13...	1445	3.9	5.0	1410	2.6	93	100
13...	1450	4.2	5.0	1410	2.6	95	100
JUN							
10...	1440	1.1	1.5	970	2.3	87	100
10...	1505	2.6	3.0	1330	2.2	89	100
10...	1525	2.6	3.0	1475	2.4	87	100
JUL							
15...	1030	1.0	1.4	970	.9	94	100
15...	1100	3.8	4.2	1230	2.0	95	100
15...	1105	3.5	4.2	1230	1.8	94	100
15...	1110	3.2	4.2	1230	2.0	90	100
15...	1115	2.8	4.2	1230	2.0	94	100
15...	1120	2.1	4.2	1230	2.1	96	100
15...	1125	1.0	4.2	1230	2.2	94	100
AUG							
05...	1100	.2	.60	1095	2.0	94	100
05...	1130	2.8	3.2	1365	2.4	96	100
05...	1135	2.3	3.2	1365	2.4	91	100
05...	1140	2.0	3.2	1365	2.4	90	100
05...	1145	1.6	3.2	1365	2.4	96	100
05...	1150	1.2	3.2	1365	2.4	96	100
05...	1155	.7	3.2	1365	2.4	97	100
05...	1200	2.3	2.7	1465	1.9	92	100
05...	1205	2.1	2.7	1465	1.8	99	100
05...	1210	1.9	2.7	1465	1.9	94	100
05...	1215	1.5	2.7	1465	1.9	96	100
05...	1220	1.1	2.7	1465	1.9	96	100
05...	1225	.7	2.7	1465	1.9	97	100
SEP							
14...	1315	.2	.60	1120	1.9	93	100
14...	1405	3.4	3.8	1365	2.1	95	100
14...	1500	2.2	2.6	1450	2.2	98	100

06891000 KANSAS RIVER AT LECOMPTON, KS--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	NUMBER OF SAM- PLING POINTS	MEAN DEPTH (FT)	CROSS SECTION LOC- ATION (FT)	STREAM VELOC- ITY (FPS)	SUS- PENDED SEDI- MENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
OCT								
17...	1205	1	2.9	1210	1.4	44	4	17
17...	1225	1	1.5	1315	1.8	41	0	1
17...	1250	1	1.0	1465	1.7	36	--	0
NOV								
14...	1055	1	2.9	1190	1.3	27	0	5
14...	1120	1	1.7	1265	1.5	17	--	0
14...	1140	1	1.1	1390	2.2	27	--	0
DEC								
11...	1105	1	3.3	1180	.7	76	4	6
11...	1125	1	2.1	1330	2.1	79	--	0
11...	1145	1	1.4	1450	2.3	71	--	0
FEB								
19...	1015	1	2.1	1040	2.4	108	--	0
19...	1045	1	2.7	1280	1.4	120	9	12
19...	1110	1	2.1	1405	2.4	113	1	2
MAR								
11...	1330	1	2.0	1030	2.6	75	--	0
11...	1405	1	2.9	1270	2.1	81	0	1
11...	1430	1	2.0	1410	2.5	77	1	2
APR								
20...	1040	1	2.1	910	2.8	1730	--	0
20...	1110	1	4.4	1180	2.2	1480	2	3
20...	1200	1	5.5	1380	2.3	1700	--	0
MAY								
13...	1250	1	4.1	890	3.1	136	--	0
13...	1330	1	4.2	1180	2.6	322	--	0
13...	1420	1	5.0	1410	2.8	336	--	0
JUN								
10...	1425	1	1.8	710	2.2	--	--	0
10...	1430	1	1.5	770	1.8	--	0	1
10...	1435	1	1.3	850	1.6	--	--	0
10...	1440	1	1.5	970	2.3	137	--	0
10...	1445	1	1.1	1030	1.4	--	--	0
10...	1450	1	1.1	1130	2.7	--	--	0
10...	1455	1	3.5	1210	1.1	--	0	1
10...	1500	1	3.3	1270	1.9	--	--	0
10...	1505	1	3.0	1330	2.2	154	--	0
10...	1510	1	2.7	1380	2.4	--	--	0
10...	1515	1	1.8	710	2.2	--	--	0
10...	1525	1	3.0	1475	2.4	146	--	0
JUL								
15...	1030	1	1.4	970	.9	175	--	0
15...	1100	1	4.2	1230	2.0	196	--	0
15...	1130	1	3.4	1350	2.2	570	--	0
AUG								
05...	1100	1	.60	1095	2.0	120	--	0
05...	1130	1	3.2	1365	2.4	122	--	0
05...	1200	1	2.7	1465	1.9	108	--	0

DATE	TIME	NUMBER OF SAM- PLING POINTS	MEAN DEPTH (FT)	CROSS SECTION LOC- ATION (FT)	STREAM VELOC- ITY (FPS)	SUS- PENDED SEDI- MENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .125 MM
SEP							
14...	1315	1	.60	1120	1.9	83	0
14...	1405	1	3.8	1365	2.1	95	0
14...	1500	1	2.6	1450	2.2	92	0

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
OCT								
17...	48	68	83	87	90	93	97	100
17...	3	20	36	46	66	93	100	--
17...	6	26	40	51	68	84	93	100
NOV								
14...	22	42	60	74	88	94	97	100
14...	16	55	83	95	100	--	--	--
14...	2	12	24	33	44	63	100	--
DEC								
11...	64	96	99	100	--	--	--	--
11...	7	22	41	60	95	100	--	--
11...	4	12	22	42	81	96	100	--
FEB								
19...	3	35	45	56	85	99	100	--
19...	29	76	97	99	100	--	--	--
19...	5	12	23	31	42	52	83	100
MAR								
11...	6	27	42	53	70	89	96	100
11...	9	26	51	63	78	87	100	--
11...	6	23	47	60	72	85	96	100
APR								
20...	1	20	67	81	92	97	100	--
20...	4	33	73	87	97	100	--	--
20...	8	48	91	99	100	--	--	--
MAY								
13...	5	53	73	86	97	99	100	--
13...	6	43	83	93	99	100	--	--
13...	2	19	86	97	100	--	--	--
JUN								
10...	2	31	51	64	81	94	98	100
10...	14	31	44	57	76	96	100	--
10...	5	24	85	96	100	--	--	--
10...	2	22	54	75	93	99	100	--
10...	3	17	52	72	94	100	--	--
10...	12	53	74	89	98	100	--	--
10...	38	64	82	89	94	98	100	--
10...	2	19	71	90	98	100	--	--
10...	6	50	85	94	99	100	--	--
10...	9	45	74	89	98	100	--	--
10...	2	31	51	64	81	94	98	100
10...	6	25	61	81	97	100	--	--
JUL								
15...	4	40	83	96	100	--	--	--
15...	17	55	80	89	95	100	--	--
15...	2	38	84	93	98	100	--	--
AUG								
05...	4	1	58	85	97	100	--	--
05...	15	67	94	98	100	--	--	--
05...	3	58	89	97	99	100	--	--

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
SEP							
14...	1	34	70	83	96	100	--
14...	10	26	45	60	76	84	100
14...	5	39	62	73	83	92	100

06891000 KANSAS RIVER AT LECOMPTON, KS--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)
OCT		
04...	1230	140
04...	1315	83
04...	1320	80
04...	1325	95
04...	1330	62
04...	1335	78
04...	1340	79
04...	1400	92
NOV		
08...	1200	43
08...	1320	43
08...	1410	38
DEC		
14...	0920	45
14...	1010	27
14...	1100	31
FEB		
11...	0900	40
11...	0940	53
11...	1020	122
MAR		
16...	1345	44
16...	1430	48
APR		
14...	0920	65
14...	1010	51
14...	1100	70
MAY		
23...	1250	6580
23...	1355	6790
23...	1400	6620
23...	1405	6470
23...	1410	6480
23...	1415	6400
23...	1420	6210
23...	1500	4900
23...	1510	4830
23...	1515	4860
23...	1520	4880
23...	1525	4840
23...	1530	4590
AUG		
17...	0930	267
17...	1025	307
17...	1120	300
SEP		
26...	0940	14
26...	1015	31
26...	1020	320
26...	1025	309
26...	1030	32
26...	1035	327
26...	1040	432
26...	1050	31
26...	1055	27
26...	1100	293
26...	1105	282
26...	1110	279
26...	1115	261

06891000 KANSAS RIVER AT LECOMPTON, KS--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMPLING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOCATION (FT)	STREAM VELOCITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
OCT								
04...	1230	1.0	1.4	1110	2.1	--	76	100
04...	1315	3.3	3.7	1365	2.3	--	86	100
04...	1320	2.6	3.7	1365	2.3	--	90	100
04...	1325	2.1	3.7	1365	2.3	--	77	100
04...	1330	1.8	3.7	1365	2.3	--	97	100
04...	1335	1.4	3.7	1365	2.3	--	80	100
04...	1340	.8	3.7	1365	2.3	--	92	100
04...	1400	1.4	1.8	1460	1.5	--	99	100
NOV								
08...	1200	1.3	1.7	1080	1.8	--	97	100
08...	1320	2.3	2.7	1350	1.7	--	98	100
08...	1410	1.6	2.0	1460	2.0	--	98	100
DEC								
14...	0920	1.7	2.1	1065	2.3	--	91	100
14...	1010	2.3	2.7	1340	1.5	--	96	100
14...	1100	1.7	2.1	1445	1.6	--	85	100
FEB								
11...	0900	2.3	2.7	1050	1.8	--	93	100
11...	0940	.8	1.2	1115	2.2	--	87	100
11...	1020	1.7	2.1	1425	.8	--	47	100
MAR								
16...	1345	1.5	1.9	1065	1.8	--	77	100
16...	1430	2.6	3.0	1350	2.0	--	90	100
16...	1515	1.2	1.6	1460	1.8	--	83	100
APR								
14...	0920	1.3	1.7	1075	1.8	--	65	100
14...	1010	1.0	1.4	1205	1.8	--	73	100
14...	1100	1.8	2.2	1395	1.1	--	82	100
MAY								
23...	1250	3.5	3.9	830	2.7	54	99	100
23...	1355	4.7	5.1	1120	2.4	59	99	100
23...	1400	4.2	5.1	1120	2.3	54	98	100
23...	1405	3.9	5.1	1120	2.3	56	98	100
23...	1410	3.3	5.1	1120	2.5	56	98	100

DATE	TIME	SAMPLING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOCATION (FT)	STREAM VELOCITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
MAY									
23...	1415	2.5	5.1	1120	2.6	57	98	100	--
23...	1420	1.2	5.1	1120	2.6	59	99	100	--
23...	1500	5.0	5.4	1390	2.6	58	98	100	--
23...	1510	4.5	5.4	1390	2.1	59	97	100	--
23...	1515	4.2	5.4	1390	2.1	56	98	100	--
23...	1520	3.6	5.4	1390	2.4	55	98	100	--
23...	1525	2.7	5.4	1390	2.9	58	98	100	--
23...	1530	1.3	5.4	1390	3.1	58	98	100	--
AUG									
17...	0930	1.1	1.5	890	--	--	98	100	--
17...	1025	2.0	2.4	1320	--	--	98	100	--
17...	1120	3.7	4.1	1450	--	--	98	100	--
SEP									
26...	0940	3.7	4.1	840	2.9	--	84	100	--
26...	1015	6.9	7.3	1220	--	--	91	100	--
26...	1020	1.7	7.3	1220	3.2	--	94	100	--
26...	1025	3.7	7.3	1220	2.7	--	92	100	--
26...	1030	5.3	7.3	1220	2.4	--	90	100	--
26...	1035	6.2	7.3	1220	2.2	--	82	100	--
26...	1040	6.7	7.3	1220	2.2	--	67	75	100
26...	1050	6.6	7.0	1430	--	--	88	100	--
26...	1055	1.6	7.0	1430	3.2	--	95	100	--
26...	1100	3.5	7.0	1430	3.0	--	93	100	--
26...	1105	5.0	7.0	1430	2.7	--	95	100	--
26...	1110	5.8	7.0	1430	2.5	--	90	100	--
26...	1115	6.3	7.0	1430	2.3	--	89	100	--

06891000 KANSAS RIVER AT LECOMPTON, KS--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAM-PLING POINTS	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS-PENDED SEDI-MENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
OCT								
04...	1230	1	1.4	1110	2.1	140	0	1
04...	1315	1	3.7	1365	2.3	83	--	0
04...	1400	1	1.8	1460	1.5	92	2	3
NOV								
08...	1200	1	1.7	1080	1.8	43	--	0
08...	1320	1	2.7	1350	1.7	43	--	0
08...	1410	1	2.0	1460	2.0	38	--	--
DEC								
14...	0920	1	2.1	1065	2.3	45	--	0
14...	1010	1	2.7	1340	1.5	27	--	0
14...	1100	1	2.1	1445	1.6	31	0	3
FEB								
11...	0900	1	2.7	1050	1.8	40	--	0
11...	0940	1	1.2	1115	2.2	53	--	--
11...	1020	1	2.1	1425	.8	122	0	1
MAR								
16...	1345	1	1.9	1065	1.8	44	--	0
16...	1630	1	3.0	1350	2.0	48	--	0
16...	1515	1	1.6	1460	1.8	--	--	0
APR								
14...	0920	1	1.7	1075	1.8	65	--	--
14...	1010	1	1.4	1205	1.8	51	--	0
14...	1100	1	2.2	1385	1.1	70	--	0
MAY								
23...	1250	1	3.9	830	2.7	6580	--	0
23...	1355	1	5.1	1120	2.4	6790	--	0
23...	1500	1	5.4	1390	2.6	4900	--	0
AUG								
17...	0930	1	1.5	890	--	267	--	0
17...	1025	1	2.4	1320	--	307	--	0
17...	1120	1	4.1	1450	--	300	--	0
SEP								
26...	0940	1	4.1	840	2.9	14	--	0
26...	1015	1	7.3	1220	--	31	--	0
26...	1050	1	7.0	1430	--	31	--	0

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIA . % FINER THAN 32.0 MM
OCT								
04...	2	8	38	62	85	95	100	--
04...	9	41	67	74	81	88	95	100
04...	6	20	51	67	87	96	100	--
NOV								
08...	1	31	60	73	81	90	100	--
08...	5	60	80	92	99	100	--	--
08...	0	30	83	96	100	--	--	--
DEC								
14...	1	47	86	95	99	100	--	--
14...	23	64	88	94	99	100	--	--
14...	15	54	69	82	93	96	96	100
FEB								
11...	2	18	40	72	97	100	--	--
11...	0	45	81	93	100	--	--	--
11...	9	35	67	84	97	100	--	--
MAR								
16...	2	22	35	49	71	89	100	--
16...	12	53	83	95	100	--	--	--
16...	4	29	58	82	100	--	--	--
APR								
14...	8	23	81	95	99	100	--	--
14...	1	9	64	82	92	99	100	--
14...	30	74	95	100	--	--	--	--
MAY								
23...	2	91	85	96	99	100	--	--
23...	5	45	74	83	90	91	92	100
23...	18	64	80	85	94	100	--	--
AUG								
17...	8	28	68	80	91	100	--	--
17...	14	64	77	92	99	100	--	--
17...	19	68	92	97	99	100	--	--
SEP								
26...	19	67	85	92	98	100	--	--
26...	21	89	98	100	--	--	--	--
26...	20	88	98	99	100	--	--	--

06891100 KANSAS RIVER AT EUDORA, KS

LOCATION.--Lat 38°57'22", long 95°05'43", in NE¼NE¼NE¼ sec.5, T.13 S., R.21 E., Douglas County, Hydrologic Unit 10270104, at county highway bridge 1.0 mi (1.6 km) north of State Highway 10 at Eudora.

DRAINAGE AREA.--58,617 mi² (151,800 km²).

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
OCT										
26...	970	8.2	10.0	--	85	10.0	17	1300	65	9.0
NOV										
22...	1090	8.3	7.0	--	15	13.2	19	1700	83	19
DEC										
20...	1280	8.2	3.0	--	19	12.0	38	620	95	230
JAN										
24...	1300	7.9	.5	--	5.2	12.0	9	2500	100	23
FEB										
22...	1220	8.4	8.5	--	22	10.9	10	170	100	22
MAR										
21...	1210	8.3	8.5	--	--	12.6	44	1600	88	22
APR										
25...	1180	8.6	17.0	--	60	13.0	50	180	84	22
MAY										
23...	380	7.9	20.5	--	750	7.6	120	B7600	80	19
JUN										
24...	390	7.9	24.5	--	500	7.8	82	B4000	81	21
JUL										
25...	660	8.6	31.5	20	--	7.9	28	B110	62	17
AUG										
22...	495	8.2	25.5	--	120	6.4	35	870	64	14
SEP										
26...	367	8.3	24.5	180	--	7.4	27	--	43	11

B Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT									
26...	40	4.1	250	0	205	2.5	140	99	555
NOV									
22...	120	7.5	260	0	213	2.1	160	140	686
DEC									
20...	130	7.1	280	0	230	2.8	180	150	733
JAN									
24...	130	7.2	310	0	254	6.2	170	130	750
FEB									
22...	120	7.1	300	0	246	1.9	180	130	729
MAR									
21...	140	7.5	240	0	197	1.9	180	170	746
APR									
25...	130	8.0	210	0	187	.9	180	160	720
MAY									
23...	21	11	120	0	98	2.4	52	20	251
JUN									
24...	23	15	150	0	123	3.0	48	24	227
JUL									
25...	65	9.5	170	5	148	.7	100	65	417
AUG									
22...	33	8.8	330	0	271	3.3	66	36	308
SEP									
26...	20	8.7	140	0	115	1.1	38	20	229

06891100 KANSAS RIVER AT EUDORA, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SOLIDS (TONS PER AC-FT)	TOTAL RESI- DUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (NO3) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)
OCT									
26...	.75	850	2.4	.44	1.2	1.6	4.0	18	.46
NOV									
22...	.93	717	.61	.32	.33	.65	1.3	5.8	1.2
DEC									
20...	1.00	768	.93	.86	.74	1.6	2.5	11	.36
JAN									
24...	1.02	766	1.3	1.7	.30	2.0	3.3	15	.76
FEB									
22...	.99	767	1.0	.70	1.0	1.7	2.7	12	.42
MAR									
21...	1.01	782	.72	.25	2.1	2.3	3.0	13	.39
APR									
25...	.90	803	.28	.03	2.4	2.4	2.7	12	.41
MAY									
23...	.34	1670	1.1	.08	3.3	3.4	4.5	20	.84
JUN									
24...	.31	1720	.75	.05	3.0	3.0	3.8	17	.87
JUL									
25...	.57	497	.01	.00	.78	.78	.79	3.5	.19
AUG									
22...	.42	741	1.3	.03	1.3	1.3	2.6	12	.43
SEP									
26...	.31	529	1.1	.39	.39	.78	1.9	8.3	.35

06891483 WAKARUSA RIVER BELOW CLINTON DAM, KS

LOCATION.--Lat 38°55'14", long 95°17'17", in NW¼NW¼SE¼ sec.15, T.13 S., R.19 E., Douglas County, Hydrologic Unit 10270104, on left bank at downstream side of county road bridge, 3.0 mi (4.8 km) south and 2.0 mi (3.2 km) west of Lawrence, and at mile 18.6 (29.9 km).

DRAINAGE AREA.--412 mi² (1,070 km²). Prior to Dec. 1, 1972, 425 mi² (1,100 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to current year. Prior to December 1972, published as "near Lawrence", sta 06891500.

REVISED RECORDS.--WSP 976: 1935. WSP 1310: 1929(M), 1933(M), 1938(M), 1945-47(M), 1949-50(M). WSP 1919: 1958, 1959.

GAGE.--Water-stage recorder. Datum of gage is 803.208 ft (244.818 m), revised, above mean sea level. Prior to May 7, 1959, nonrecording gage, and May 8, 1959 to Nov. 30, 1972, water-stage recorder at site 2.3 mi (3.7 km) downstream at datum 3.95 ft (1.204 m) lower.

REMARKS.--Records fair. Occasional regulation due to Clinton Dam (under construction).

AVERAGE DISCHARGE.--48 years, 195 ft³/s (5.522 m³/s), 141,300 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,200 ft³/s (685 m³/s) July 12, 1951, gage height, 31.59 ft (9.629 m), from floodmarks at site and datum then in use, from rating curve extended above 15,000 ft³/s (425 m³/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1880, that of July 12, 1951, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 18	1400	3,650	103	21.88	6.669	June 24	2100	4,810	136	24.32	7.413
June 21	1400	* 5,820	165	26.03	7.934	June 26	2200	4,100	116	22.88	6.974
June 23	0200	2,570	72.8	19.21	5.855	Sept. 13	0900	4,000	113	22.67	6.910

Minimum discharge, no flow Oct. 15-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.80	.54	.25	.90	2.8	.10	4.1	536	3380	12	1800
2	.20	.60	.60	.20	.94	2.9	.14	12	395	2820	11	1500
3	.15	.60	.73	.20	1.0	3.7	.11	15	101	[illegible]	10	703
4	.10	.50	.60	.25	1.1	3.3	.10	13	39	1240	11	299
5	.05	.50	.50	.30	1.3	3.1	.13	70	19	594	75	169
6	.05	.45	.51	.25	1.6	3.3	.14	24	11	272	86	165
7	.05	.45	.41	.25	2.0	3.9	.34	13	7.3	146	42	114
8	.05	.85	.34	20	2.1	3.3	.48	9.1	4.9	278	27	73
9	.03	.58	.32	.20	2.5	1.7	.51	7.6	3.6	272	19	57
10	.02	.57	.36	.25	2.9	1.2	.53	5.6	2.8	169	16	43
11	.02	.52	.73	.35	4.0	1.9	.60	4.7	2.2	234	14	35
12	.02	.44	1.4	.38	5.3	3.3	.63	4.2	2.2	418	13	33
13	.01	.40	1.0	.40	6.3	2.0	.75	3.7	4.2	307	12	2330
14	.01	.40	.84	.41	7.2	1.6	1.1	3.4	5.0	182	11	662
15	.00	.43	.76	.39	6.0	1.4	1.4	3.4	1.6	107	11	816
16	.00	.47	.72	.35	4.5	1.1	1.7	3.8	.43	75	19	991
17	.00	.47	.68	.31	4.1	.85	1.9	7.7	.35	55	19	916
18	.00	.53	.57	.36	4.0	.67	2.3	7.8	2050	44	17	864
19	.00	.54	.64	.32	4.4	.56	2.1	5.7	2410	38	11	818
20	.00	.54	.57	.36	4.2	.47	2.7	346	2450	33	12	798
21	.00	.52	.46	.49	3.7	.48	21	628	4100	29	7.8	770
22	.00	.52	.46	.51	3.7	.49	16	524	2280	27	6.8	276
23	.86	.52	.43	.54	5.4	.48	8.2	257	2580	25	11	130
24	.34	.52	.43	.57	5.1	.46	4.6	211	4140	23	19	261
25	.22	.53	.46	.57	4.3	30	3.1	108	3020	21	35	163
26	.19	.56	.43	.57	4.0	22	2.4	46	3830	17	35	103
27	.80	.57	.43	.57	3.9	2.0	1.9	20	4010	19	26	78
28	.73	.53	.49	.68	3.4	1.0	1.4	13	3810	17	180	64
29	.70	.53	.40	.90	---	.49	.94	11	3700	15	121	56
30	.90	.54	.40	.90	---	.25	2.1	20	3610	16	115	52
31	1.0	---	.30	.80	---	.11	---	115	---	14	96	---
TOTAL	6.70	15.98	17.51	13.08	99.84	100.81	79.32	2516.8	43125.58	12998	1100.6	15218
MEAN	.22	.53	.56	.42	3.57	3.25	2.64	81.2	1438	419	35.5	507
MAX	1.0	.85	1.4	.90	7.2	30	21	628	4140	3380	180	2330
MIN	.00	.40	.30	.20	.90	.11	.10	3.4	.35	14	6.8	33
AC-FT	13	32	[illegible]	26	198	200	157	4990	85540	25780	2180	30180

CAL YR 1976 TOTAL 12658.27 MEAN 34.6 MAX 955 MIN .00 AC-FT 25110
WTR YR 1977 TOTAL 75292.22 MEAN 206 MAX 4140 MIN .00 AC-FT 149300

06892000 STRANGER CREEK NEAR TONGANOXIE, KS

LOCATION.--Lat 39°06'59", long 95°00'39", in NE¼NE¼NW¼ sec.7, T.11 S., R.22 E., Leavenworth County, Hydrologic Unit 10270104, at downstream side of bridge on U.S. Highway 40, 2.0 mi (3.2 km) upstream from Tonganoxie Creek, 4.0 mi (6.4 km) east of Tonganoxie, and at mile 18.1 (29.1 km).

DRAINAGE AREA.--406 mi² (1,052 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to current year.

REVISED RECORDS.--WSP 1440: 1929, 1936(M), 1940, 1942(M), 1949. WSP 1710: 1951.

GAGE.--Water-stage recorder. Datum of gage is 801.95 ft (244.434 m) above mean sea level (levels by Corps of Engineers). April 30, 1929, to June 1, 1939, nonrecording gage and June 2, 1939, to June 1, 1960, water-stage recorder, both at site 1.3 mi (2.1 km) downstream at datum 5.00 ft (1.524 m) lower.

REMARKS.--Records good except those for October, November, and December, which are poor.

AVERAGE DISCHARGE.--48 years, 216 ft³/s (6.117 m³/s), 156,500 acre-ft/yr (193 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft³/s (937 m³/s) July 12, 1951, gage height, 27.64 ft (8.425 m), present site and datum, from rating curve extended above 16,000 ft³/s (453 m³/s) on basis of contracted-opening measurement of peak flow; maximum stage, 28.70 ft (8.748 m) Oct. 13, 1961; no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft³/s (73.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Aug. 5	1200	[1]3,340	94.6	[2]21.26	6.480
Sept. 1	1200	2,820	79.9	18.73	5.709
Sept. 13	0600	*14,900	422	28.88	8.803

[1] Estimated

[2] Backwater

Minimum daily discharge, 0.15 ft³/s (0.004 m³/s), Oct. 4-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	2.0	2.5	3.1	2.1	14	15	5.5	322	41	.90	2280
2	.20	2.8	2.6	2.8	2.3	11	13	5.2	234	20	.90	2110
3	.20	6.4	2.8	2.8	2.4	12	10	10	208	14	.90	1390
4	.15	5.4	3.0	2.8	2.6	13	9.1	15	71	12	1.3	362
5	.15	2.5	3.2	2.7	2.5	11	9.8	12	29	8.4	1930	426
6	.15	2.0	3.2	2.7	2.3	12	9.8	110	17	6.3	1640	242
7	.15	2.0	3.2	2.7	2.2	13	12	535	11	4.7	1040	136
8	.15	2.5	2.8	2.8	2.2	11	12	151	7.6	19	328	82
9	.15	6.0	2.3	2.7	2.3	10	12	88	5.5	32	321	61
10	.15	3.5	2.3	2.4	3.0	9.7	9.8	80	4.6	46	71	49
11	.15	4.5	2.5	2.2	20	18	7.6	33	4.2	82	47	36
12	.15	5.0	2.5	2.0	11	51	6.1	17	71	60	37	7400
13	.15	4.5	2.7	2.0	11	83	5.7	12	111	21	25	13700
14	.15	4.0	3.0	2.2	57	72	6.2	9.1	18	10	18	13200
15	.15	3.5	3.5	2.3	40	36	6.2	7.1	7.8	6.5	17	10900
16	.15	4.5	4.0	2.2	25	22	6.0	5.4	5.6	4.5	563	7290
17	.15	3.5	4.0	2.0	15	16	6.0	5.0	5.3	3.5	501	4490
18	.15	3.0	4.5	1.9	12	13	6.6	4.6	716	2.5	209	1430
19	.20	2.6	4.0	1.6	13	11	8.1	4.1	1310	1.7	84	377
20	.20	2.5	3.5	1.6	14	9.3	10	4.3	763	1.2	43	241
21	.20	2.3	3.0	1.7	11	7.8	23	282	255	1.0	30	361
22	.20	3.2	2.8	1.7	15	7.8	18	173	862	.80	21	378
23	.30	3.4	3.0	2.0	29	7.8	40	116	312	.70	17	298
24	.40	4.6	3.5	2.3	29	7.6	35	681	191	.60	16	1740
25	.50	5.0	3.5	2.4	46	7.3	19	214	114	.50	13	1980
26	.70	3.6	4.0	2.5	35	7.0	14	85	107	.45	12	560
27	1.2	3.1	4.0	2.5	24	8.3	9.4	41	54	.45	11	261
28	1.8	2.8	3.5	2.6	18	15	7.0	25	36	.50	850	204
29	1.6	2.5	3.4	2.0	---	22	5.6	16	69	.50	423	181
30	1.4	2.5	3.8	2.0	---	18	5.9	13	93	.63	313	169
31	2.0	---	3.3	2.1	---	15	---	269	---	.83	101	---
TOTAL	13.55	105.7	99.9	71.3	448.9	571.6	357.9	3028.3	6014.6	403.26	8685.00	72334
MEAN	.44	3.52	3.22	2.30	16.0	18.4	11.9	97.7	200	13.0	280	2411
MAX	2.0	6.4	4.5	3.1	57	83	40	681	1310	82	1930	13700
MIN	.15	2.0	2.3	1.6	2.1	7.0	5.6	4.1	4.2	.45	.90	36
AC-FT	27	210	198	141	890	1130	710	6010	11930	800	17230	143500

CAL YR 1976 TOTAL 28676.51 MEAN 78.4 MAX 3110 MIN .15 AC-FT 56880
WTR YR 1977 TOTAL 92134.01 MEAN 252 MAX 13700 MIN .15 AC-FT 182700

06892000 STRANGER CREEK NEAR TONGANOXIE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-59, 1976 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY					
24...	1725	650	155	4180	7340
AUG					
05...	1030	3240	1500	2080	18200
SEP					
02...	1130	1940	175	1330	7150
13...	1050	13700	100	29	1100

06892350 KANSAS RIVER AT DESOTO, KS
(National stream-quality accounting network and pesticide station)

LOCATION.--Lat 38°59'00", long 94°57'52", in SE¼NE¼NE¼ sec.27, T.12 S., R.22 E., Leavenworth County, Hydrologic Unit 10270104, on left bank at downstream side of bridge on county road, north edge of DeSoto, 0.4 mi (0.6 km) upstream from Kill Creek and at mile 31.0 (49.9 km).

DRAINAGE AREA.--59,756 mi² (154,768 km²), of which a large area is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1917 to current year. Monthly discharge only for some periods published in WSP 1310. Prior to October 1973, published as "at Bonner Springs".

REVISED RECORDS.--WSP 806: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 758.87 ft (231.304 m) above mean sea level. July 9, 1917, to Apr. 23, 1934, nonrecording gage; Apr. 24, 1934, to Nov. 26, 1961, water-stage recorder at site 9.7 mi (15.6 km) downstream at datum 11.81 ft (3.600 m) lower; Nov. 26, 1961, to Sept. 30, 1971, water-stage recorder at site 10.2 mi (16.4 km) downstream at datum 17.81 ft (5.428 m) lower; and Oct. 1, 1971, to Sept. 30, 1973, at site 10.2 mi (16.4 km) downstream at datum 22.81 ft (6.592 m) lower.

REMARKS.--Records fair except those for winter periods, which are poor. Natural flow of stream affected by lakes and reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--60 years, 6,865 ft³/s (194.4 m³/s) 4,974,000 acre-ft/yr (6.13 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 510,000 ft³/s (14,400 m³/s) July 13, 1951, gage height, 37.3 ft (11.37 m), from floodmarks, present site and datum, from rating curve extended above 128,000 ft³/s (3,620 m³/s) on basis of slope-area measurement of peak flow at mile 19.52 (31.41 km) and at mile 18.60 (29.93 km); minimum observed, 160 ft³/s (4.53 m³/s) Oct. 11, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1844, that of July 13, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 17,000 ft³/s (481 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 2	1300	23,200	657	11.93	3.636	June 25	2000	40,500	1,150	15.08	4.596
June 20	0100	62,300	1,760	18.33	5.587	Sept. 1	2100	47,500	1,350	16.22	4.944
June 22	0300	46,800	1,330	16.12	4.913	Sept. 13	1600	*76,800	2,170	20.22	6.163

Minimum daily discharge, 730 ft³/s (20.7 m³/s) Jan. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	967	1330	800	760	870	1150	1270	997	16500	18600	2500	39000
2	919	1230	850	770	900	1110	1210	1190	21600	15900	2300	40800
3	924	1150	930	770	900	1060	1070	1430	17600	12900	2260	29100
4	936	1260	990	710	870	1140	1100	1230	13600	10500	2320	27300
5	1090	1090	1000	800	900	1190	1270	1520	12800	8880	7920	27300
6	976	1180	1000	760	920	1100	1200	1420	12700	9140	7730	25000
7	1090	1010	1000	740	920	1080	1210	1970	9930	9610	5740	20300
8	981	1110	1000	740	920	1170	1360	2070	7760	9630	4180	18700
9	1180	1020	900	730	920	1100	1220	1670	6690	8260	3610	18500
10	1180	1040	900	740	970	1020	1140	1360	5760	8080	3720	17900
11	1600	1010	900	780	1050	1100	1070	1290	4760	8160	4180	17100
12	2570	999	870	800	1150	1270	1090	1190	5550	7040	4080	25500
13	2660	953	930	750	1250	1390	1030	1090	5220	6650	3470	67900
14	2410	956	870	750	1300	1340	1030	1020	4760	5970	3260	68000
15	1820	956	900	800	1350	997	1010	1110	3610	5420	3340	39500
16	1520	1150	1000	800	1350	1150	1050	1130	2670	4880	4010	36100
17	1290	835	1050	800	1400	1020	990	1100	2390	4680	4530	35400
18	1230	1130	1190	790	1480	1090	989	1100	11800	4370	3800	31300
19	1270	1010	1270	830	1450	1130	990	1120	39300	4940	5200	28500
20	1210	947	1200	850	1480	1040	1020	1230	56100	4980	8200	27000
21	1170	887	930	930	1180	1030	1270	10400	39500	4050	10100	26600
22	1120	917	870	970	1280	1100	1130	12600	44200	3320	10300	26000
23	1200	1050	830	1000	1090	1080	1060	8160	36100	3120	11200	23300
24	1310	1000	870	1000	1280	1010	1120	10100	30400	3010	12700	17500
25	1260	1040	910	1050	1190	1080	1100	7260	39200	2900	13000	16800
26	1160	995	910	1050	1090	1100	1130	4960	34900	2810	13100	14800
27	1210	1080	960	1050	1170	1120	1140	4100	27900	2750	10800	13400
28	1320	1040	960	1100	1150	1090	1120	4300	24300	2680	11000	13000
29	1210	770	920	1060	---	1070	1120	4400	21500	2580	10800	12700
30	1320	770	850	950	---	1100	989	4770	19900	2650	14600	12600
31	1350	---	800	860	---	1200	---	8720	---	2560	16300	---
TOTAL	41453	30915	29360	26550	31780	34627	33488	105787	578600	200700	220200	816700
MEAN	1337	1031	947	856	1135	1117	1116	3412	19290	6474	7103	27220
MAX	2660	1330	1270	1100	1480	1390	1360	12600	56100	18600	16300	68000
MIN	919	770	800	730	870	997	989	997	2390	2560	2260	12600
AC-FT	82220	61320	58240	52660	63040	68680	66420	209800	1148000	398100	436800	1620000

CAL YR 1976 TOTAL 1290614 MEAN 3526 MAX 34500 MIN 770 AC-FT 2560000
WTR YR 1977 TOTAL 2150160 MEAN 5891 MAX 68000 MIN 730 AC-FT 4265000

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to current year.
WATER TEMPERATURES: October 1974 to September 1976.

REMARKS.--Unpublished records of partial daily water temperatures are available in files of district office.

COOPERATION.--Pesticide data were furnished by Environmental Protection Agency, samples were collected and analyses reviewed by U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,600 micromhos Jan. 18, 1975; minimum, 209 micromhos Sept. 15, 1977.
WATER TEMPERATURES: Maximum, 29.0°C on several days during Aug. 1976; minimum, 0.0°C Feb. 26, 27, 1975.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 310 micromhos was observed Oct. 12, 1973.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,460 micromhos Jan. 9; minimum daily, 209 micromhos Sept. 15.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
OCT												
26...	1180	920	8.1	9.5	90	270	89	77	18	79	2.1	8.2
NOV												
23...	1100	1160	8.2	4.5	15	300	97	86	21	120	3.0	8.2
DEC												
20...	1150	1250	7.9	2.0	20	340	120	97	23	120	2.8	7.5
JAN												
24...	750	1320	8.0	.5	7	370	130	110	24	120	2.7	8.4
FEB												
22...	1280	1140	8.5	8.4	10	340	110	99	22	110	2.6	6.9
MAR												
22...	1100	1180	8.8	7.0	10	300	110	84	22	130	3.3	7.5
APR												
25...	1160	1150	8.8	17.0	70	290	130	81	22	130	3.3	7.8
MAY												
24...	11000	340	7.8	20.5	1200	120	7	38	6.5	22	.9	4.8
JUN												
24...	28100	370	8.0	24.0	600	150	40	47	9.0	19	.7	6.2
JUL												
25...	3100	645	8.7	30.5	25	220	59	58	17	60	1.8	8.8
AUG												
23...	9600	484	8.3	24.0	130	160	27	51	7.6	32	1.1	8.3

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT												
26...	216	0	130	92	.4	10	528	.72	1680	2.9	.23	.50
NOV												
23...	243	0	170	150	.4	3.6	669	.91	1990	.52	1.6	.70
DEC												
20...	263	0	180	150	.3	8.3	742	1.01	2300	.99	1.3	.37
JAN												
24...	303	0	180	140	.5	9.2	758	1.03	1540	1.3	1.5	.52
FEB												
22...	276	0	170	130	.4	8.4	720	.98	2490	1.1	1.0	.41
MAR												
22...	218	7	180	170	.4	2.7	726	.99	2160	.79	1.9	.55
APR												
25...	200	0	180	150	.7	.3	661	.90	2070	.19	2.2	.41
MAY												
24...	140	0	42	24	.4	6.1	215	.29	6390	1.2	3.9	1.0
JUN												
24...	140	0	45	22	.3	9.8	225	.31	17100	.72	2.3	.80
JUL												
25...	190	0	110	65	.4	4.6	417	.57	3490	.01	.95	.20
AUG												
23...	160	0	67	24	.4	8.1	293	.40	7600	1.2	1.3	.43

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED OXYGEN (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO- PLANK- TON (CELLS PER ML)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT										
26...	10.4	1700	570	--	--	--	--	--	--	--
NOV										
23...	12.1	3800	B2400	5.2	5200	--	2.15	.858	--	59.5
DEC										
20...	12.7	190	210	--	7700	--	--	--	--	--
JAN										
24...	11.8	1300	580	--	4100	--	--	--	--	--
FEB										
22...	10.6	B110	750	4.7	4000	--	--	--	--	--
MAR										
22...	12.2	400	280	--	--	--	--	--	--	--
APR										
25...	15.0	60	390	--	380000	--	--	--	--	--
MAY										
24...	6.4	16000	54000	74	5600	--	--	--	--	--
JUL										
25...	9.6	50	30	--	--	--	--	--	--	--
AUG										
23...	6.9	1500	520	9.7	--	--	--	--	--	--
SEP										
27...	6.7	--	--	--	--	.393	--	--	.314	--

B Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS- PENDED ARSENIC (AS) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	SUS- PENDED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CHRO- MIUM (CR) (UG/L)	SUS- PENDED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
NOV										
23...	4	0	4	<10	<9	1	0	0	0	<50
FEB										
22...	3	0	3	<10	<9	1	0	0	0	<50
MAY										
24...	65	--	1	<10	--	1	60	--	10	50
AUG										
23...	5	3	2	10	10	0	10	0	10	<50

DATE	SUS- PENDED COBALT (CO) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS- PENDED COPPER (CU) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS- PENDED LEAD (PB) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)
NOV										
23...	<49	1	10	7	3	530	20	<100	<98	2
FEB										
22...	<50	0	10	8	2	880	90	<100	<99	1
MAY										
24...	--	0	70	--	4	77000	80	100	--	5
AUG										
23...	<49	1	30	29	1	4800	20	<100	<98	2

DATE	DIS- SOLVED MAN- GANESE (MN) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	SUS- PENDED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	TOTAL SELE- NIUM (SE) (UG/L)	SUS- PENDED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS- PENDED ZINC (ZN) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
NOV										
23...	30	70	40	.1	1	0	1	10	0	10
FEB										
22...	40	60	20	.0	2	0	2	10	10	0
MAY										
24...	2	3200	3200	.0	2	2	0	250	240	10
AUG										
23...	4	360	360	.0	0	0	0	40	30	10

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALDRIN (UG/L)	TOTAL ATRA-ZINE (UG/L)	TOTAL CHLOR-DANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DI-AZINON (UG/L)	TOTAL DI-ELDRIN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL ETHION (UG/L)	TOTAL HEPTA-CHLOR (UG/L)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)
NOV												
04...	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
18...	ND	.46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY												
06...	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG												
19...	ND	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	TOTAL LINDANE (UG/L)	TOTAL MALA-THION (UG/L)	TOTAL METH-OXY-CHLOR (UG/L)	TOTAL METHYL PARA-THION (UG/L)	TOTAL METHYL TRI-THION (UG/L)	TOTAL PARA-THION (UG/L)	TOTAL SILVEX (UG/L)	SIMA-ZINE TOTAL((UG/L)	TOTAL TOX-APHENE (UG/L)	TOTAL TRI-THION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)
NOV												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	.91	ND
FEB												
18...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY												
06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG												
19...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Not determined; detection limit is 0.01 UG/L.

DATE	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	ATRA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG)	DDD IN BOTTOM MA-TERIAL (UG/KG)	DDE IN BOTTOM MA-TERIAL (UG/KG)	DDT IN BOTTOM MA-TERIAL (UG/KG)	DI-AZINON IN BOTTOM MA-TERIAL (UG/KG)	DI-ELDRIN IN BOTTOM MA-TERIAL (UG/KG)	ENDRIN IN BOTTOM MA-TERIAL (UG/KG)	ETHION IN BOTTOM MA-TERIAL (UG/KG)	HEPTA-CHLOR IN BOTTOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE IN BOT-TOM MA-TERIAL (UG/KG)
MAY												
06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	LINDANE IN BOTTOM MA-TERIAL (UG/KG)	MALA-THION IN BOTTOM MA-TERIAL (UG/KG)	METHOX-YCHLOR IN BOT-TOM MA-TERIAL (UG/KG)	METHYL PARA-THION IN BOT-TOM MA-TERIAL (UG/KG)	METHYL TRI-THION IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION IN BOTTOM MA-TERIAL (UG/KG)	SILVEX IN BOTTOM MA-TERIAL (UG/KG)	SIMA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	TOX-APHENE IN BOTTOM MA-TERIAL (UG/KG)	TRI-THION IN BOTTOM MA-TERIAL (UG/KG)	2,4-D IN BOTTOM MA-TERIAL (UG/KG)	2,4,5-T IN BOTTOM MA-TERIAL (UG/KG)
MAY												
06...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Not detected; detection limit is 0.10 UG/KG.

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PHYTOPLANKTON ANALYSES (OCT.1976 - MAY.1977)

DATE	OCT 26.76		NOV 23.76		DEC 20.76		JAN 24.77	
TIME	1425		1000		1530		1500	
TOTAL CELLS/ML	3600		5200		7700		4100	
DIVERSITY: DIVISION	1.2		1.2		1.6		1.2	
.CLASS	1.3		1.2		1.6		1.2	
..ORDER	1.9		1.8		2.3		1.5	
...FAMILY	2.0		1.9		2.9		1.8	
....GENUS	2.0		2.0		3.4		2.4	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	150	4	45	1	1400#	19	*	0
....CHLORELLA	--	-	--	-	--	-	140	3
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	250	3	89	2
....OOCYSTIS	--	-	--	-	340	4	64	2
....SELENASTRUM	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	180	3	170	2	25	1
....SCENEDESMUS	120	3	--	-	380	5	51	1
....TETRASTRUM	--	-	--	-	--	-	51	1
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CARTERIA	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	91	3	--	-	1600#	20	420	10
...VOLVOCACEAE								
....EUDORINA	--	-	--	-	--	-	51	1
..ZYGNEMATALES								
...DESMIDIACEAE								
....CLOSTERIUM	--	-	--	-	42	1	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	600#	18	3300#	62	500	7	64	2
....MELOSIRA	--	-	--	-	--	-	25	1
..PENNALES								
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	--	-
...DIATOMACEAE								
....DIATOMA	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....SYNEDRA	--	-	--	-	--	-	25	1
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	--	-	170	2	38	1
...NAVICULACEAE								
....CALONEIS	--	-	--	-	--	-	--	-
....GYROSIGMA	30	1	--	-	--	-	--	-
....NAVICULA	91	3	230	4	250	3	100	2
....PINNULARIA	--	-	--	-	--	-	--	-
...NITZSCHIACEAE								
....HANTZSCHIA	--	-	--	-	--	-	--	-
....NITZSCHIA	61	2	320	6	1200#	15	64	2
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	130	2	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...CHROMULINACEAE								
....CHRYSOCOCCUS	--	-	--	-	--	-	--	-
...OCHROMONADACEAE								
....OCHROMONAS	61	2	--	-	--	-	38	1
CYANOPHYTA (BLUE-GREEN ALGAE)								
.MYXOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	240	7	230	4	--	-	--	-
..OSCILLATORIALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	230	4	420	5	570	14
....OSCILLATORIA	2100#	59	450	9	670	9	2300#	55
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	42	1	*	0
....TRACHELOMONAS	--	-	320	6	84	1	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	84	1	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PHYTOPLANKTON ANALYSES (OCT.1976 - MAY.1977)

DATE	FEB 22.77	APR 25.77	MAY 24.77
TIME	1430	1400	0930
TOTAL CELLS/ML	4000	380000	5600
DIVERSITY: DIVISION	1.4	1.1	1.6
.CLASS	1.5	1.1	1.6
..ORDER	2.0	1.2	1.6
...FAMILY	2.7	1.5	2.6
....GENUS	2.8	1.8	3.0

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	--	-	--	-	690	12
...MICRACTINIACEAE						
....GOLENKINIA	37	1	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	110	3	10000	3	--	-
....CHLORELLA	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	10000	3	--	-
....KIRCHNERIELLA	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-
....SELENASTRUM	37	1	65000#	17	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	21000	5	--	-
....CRUCIGENIA	--	-	--	-	--	-
....SCENEDESMUS	*	0	16000	4	820	15
....TETRASTRUM	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CARTERIA	37	1	--	-	--	-
....CHLAMYDOMONAS	1600#	41	--	-	--	-
...VOLVOCACEAE						
....EUDORINA	--	-	--	-	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....CLOSTERIUM	--	-	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	330	8	250000#	64	69	1
....MELOSIRA	--	-	--	-	--	-
..PENNALES						
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	69	1
...DIATOMACEAE						
....DIATOMA	--	-	--	-	*	0
...FRAGILARIACEAE						
....SYNEDRA	--	-	--	-	69	1
...GOMPHONEMATACEAE						
....GOMPHONEMA	150	4	--	-	410	7
...NAVICULACEAE						
....CALONEIS	--	-	--	-	270	5
....GYROSIGMA	--	-	--	-	--	-
....NAVICULA	300	7	--	-	480	9
....PINNULARIA	--	-	--	-	*	0
...NITZSCHIACEAE						
....HANTZSCHIA	--	-	--	-	69	1
....NITZSCHIA	700#	18	2600	1	270	5
...SURIRELLACEAE						
....SURIRELLA	260	7	--	-	140	2
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...CHROMULINACEAE						
....CHRYSOCOCCUS	37	1	--	-	--	-
...OCHROMONADACEAE						
....OCHROMONAS	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.MYXOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	--	-	10000	3	--	-
..OSCILLATORIALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	*	0
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	1900#	34
....OSCILLATORIA	220	6	--	-	340	6
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	110	3	--	-	--	-
....TRACHELOMONAS	--	-	2600	1	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1290	1140	1120	1430	1260	1130	1020	1140	445	424	785	352
2	1280	1140	1120	1410	1010	1090	1030	1050	398	451	805	314
3	1280	1150	1120	1400	1010	1050	1100	965	434	486	815	330
4	1290	1150	1120	1390	1110	1160	1090	1030	480	525	800	375
5	1290	1150	1150	1340	1270	1050	1020	935	488	550	570	353
6	934	1150	1150	1440	1260	788	1030	970	489	545	575	350
7	1100	1150	1130	1450	997	941	1030	855	530	535	625	359
8	1150	1150	1140	1450	1020	854	985	840	570	533	680	366
9	1050	1090	1140	1460	950	1080	1020	955	605	560	710	372
10	1050	1110	1150	1450	947	946	1070	985	625	565	705	382
11	920	1120	1150	1380	1030	994	1100	1010	660	563	680	379
12	775	1120	1120	1340	1280	936	1090	1050	630	590	685	290
13	747	1110	1000	1430	1260	876	1120	1090	640	605	720	219
14	779	1120	1090	1420	1020	1110	1130	1130	665	615	730	243
15	875	1120	939	1360	1040	819	1140	1080	710	635	725	209
16	940	1170	1050	1350	1000	1080	1120	1070	770	650	690	227
17	1010	1130	1150	1340	1040	1130	1150	1080	800	670	665	268
18	1020	1120	1150	1350	1060	1090	1140	1090	585	675	574	299
19	1010	1120	1040	1300	972	1070	1150	1070	296	650	633	390
20	1030	1120	1200	1270	1100	1120	1130	1030	236	645	580	340
21	1060	1120	1190	1190	966	1130	1020	478	295	690	520	350
22	904	1140	1190	1160	985	1090	1070	425	274	725	508	350
23	902	1120	1180	1150	1020	1100	1100	565	311	740	504	350
24	934	1120	1170	1140	1060	1130	1080	530	340	745	542	380
25	901	1120	1090	1130	1040	1100	1090	585	297	755	422	380
26	902	1130	1100	1120	898	1090	1070	650	317	760	448	430
27	900	1120	1090	1110	974	1080	1060	685	355	765	440	450
28	941	1120	1170	1090	1070	1090	1080	680	378	770	427	440
29	1160	1130	1210	1110	---	1100	1090	670	399	770	809	440
30	1140	1140	1270	1170	---	1090	1150	660	413	775	440	450
31	1140	---	1340	1260	---	1040	---	555	---	780	434	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	9.0	9.0		9.0	9.0		---			---	24.0
2	17.0	9.0	9.0		9.0	10.0		---			---	23.0
3	16.0	8.0	9.0		9.0	10.0		---			---	25.0
4	17.0	9.0	10.0		9.0	9.0		---			---	25.0
5	15.0	9.0	10.0		10.0	11.0		---			---	25.0
6	16.0	10.0	9.0		9.0	11.0		---			---	25.0
7	16.0	11.0	9.0		9.0	10.0		---			---	26.0
8	17.0	9.0	9.0		9.0	9.0		---			---	26.0
9	16.0	9.0	9.0		8.0	9.0		---			---	25.0
10	17.0	9.0	10.0		9.0	9.0		---			---	25.0
11	16.0	10.0	10.0		9.0	10.0		---			---	23.0
12	17.0	9.0	9.0		10.0	10.0		---			---	22.0
13	16.0	9.0	9.0		9.0	11.0		---			---	21.0
14	17.0	10.0	9.0		10.0	10.0		---			---	20.0
15	16.0	9.0	10.0		10.0	9.0		---			---	20.0
16	16.0	9.0	10.0		9.0	10.0		---			---	20.5
17	17.0	9.0	9.0		10.0	9.0		---			---	21.0
18	15.0	9.0	9.0		9.0	10.0		24.0			25.0	24.0
19	15.0	8.0	10.0		10.0	---		23.0			25.0	23.0
20	16.0	9.0	9.0		9.0	---		23.0			25.0	23.0
21	16.0	10.0	9.0		9.0	---		24.0			25.5	22.0
22	13.0	9.0	9.0		8.0	---		22.0			27.0	23.0
23	12.0	9.0	10.0		8.0	---		---			25.0	23.0
24	11.0	9.0	9.0		9.0	---		---			24.0	21.5
25	11.0	9.0	10.0		9.0	---		---			24.0	22.5
26	10.0	10.0	10.0		10.0	---		---			25.0	22.0
27	7.0	9.0	9.0		9.0	---		---			27.0	22.0
28	8.0	11.0	10.0		10.0	---		---			24.5	21.5
29	9.0	10.0	9.0		---	---		---			24.0	21.5
30	10.0	9.0	9.0		---	---		---			24.0	22.5
31	10.0	---	10.0		---	---		---			25.0	---

06892350 KANSAS RIVER AT DESOTO, KS--Continued

(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	SAMP-LING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
OCT							
10...	1045	.7	1.1	430	1.4	87	100
10...	1115	1.3	1.7	625	1.6	98	100
10...	1145	1.4	1.8	745	1.9	93	100
23...	1420	.6	1.0	490	2.1	94	100
23...	1440	1.0	1.4	650	1.7	96	100
23...	1505	.6	1.0	765	1.5	91	100
NOV							
06...	1040	1.4	1.8	420	2.1	92	100
06...	1130	1.7	2.1	565	1.7	93	100
06...	1200	3.6	4.0	780	1.3	88	100
21...	1435	.7	1.1	400	1.7	91	100
21...	1515	1.0	1.4	660	2.2	73	100
21...	1540	1.2	1.6	760	1.9	67	100
DEC							
04...	1405	1.3	1.7	360	2.2	98	100
04...	1440	2.4	2.8	560	2.4	93	100
04...	1535	2.5	2.9	690	2.5	87	100
FEB							
10...	1050	2.8	3.2	385	2.2	76	100
10...	1125	2.2	2.6	480	2.7	66	100
10...	1150	2.5	2.9	640	1.6	79	100
MAR							
18...	0920	1.2	5.0	340	3.0	92	100
18...	0925	2.5	5.0	340	2.6	93	100
18...	0930	3.3	5.0	340	2.6	93	100
18...	0940	3.9	5.0	340	2.3	91	100
18...	0950	4.2	5.0	340	2.3	81	100
18...	0955	4.6	5.0	340	2.6	95	100
18...	1025	.9	4.1	450	2.4	88	100
18...	1030	3.1	4.1	450	2.4	49	--
18...	1035	3.7	4.1	450	2.4	93	100
18...	1110	3.1	3.5	750	.8	94	100
APR							
01...	1335	5.1	5.5	315	2.6	91	100
01...	1405	2.4	2.8	390	2.4	90	100
01...	1450	.3	.70	670	1.3	97	100
16...	1015	4.4	4.8	320	3.0	92	100
16...	1020	.9	4.8	320	3.4	94	100
16...	1025	2.0	4.8	320	3.1	92	100
16...	1030	2.7	4.8	320	3.0	93	100
16...	1035	3.1	4.8	320	2.2	95	100
16...	1040	3.3	4.8	320	2.6	93	100
16...	1100	2.7	3.1	405	3.1	92	100
16...	1145	1.5	1.9	560	1.8	86	100

DATE	TIME	SAMP-LING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
APR										
23...	1045	12	13	355	3.9	54	98	100	--	--
23...	1055	11	13	355	3.0	50	97	100	--	--
23...	1100	10	13	355	3.8	52	97	99	100	--
23...	1105	9.0	13	355	3.8	52	97	99	100	--
23...	1110	6.3	13	355	4.6	55	97	99	100	--
23...	1115	2.9	13	355	4.8	--	98	100	--	--
23...	1135	8.8	9.2	505	3.9	46	93	95	96	100
23...	1140	8.3	9.2	505	3.3	44	85	89	92	100
23...	1145	7.7	9.2	505	2.7	55	93	95	97	100
23...	1150	6.6	9.2	505	4.0	49	94	97	100	--
23...	1155	4.6	9.2	505	4.1	48	95	97	100	--
23...	1200	2.1	9.2	505	4.4	50	98	100	--	--
23...	1220	8.0	8.4	690	3.6	46	95	98	99	100
23...	1230	7.6	8.4	690	3.7	47	95	100	--	--
23...	1240	7.0	8.4	690	3.2	47	93	97	100	--
23...	1245	6.0	8.4	690	3.6	48	94	98	100	--
23...	1250	4.2	8.4	690	3.6	45	94	99	100	--
23...	1255	1.9	8.4	690	4.1	53	95	100	--	--
26...	1025	10	11	350	4.1	53	97	100	--	--
26...	1032	9.7	11	350	2.9	54	96	98	99	100
26...	1039	9.0	11	350	3.6	56	96	100	--	--
26...	1046	7.7	11	350	3.8	42	95	100	--	--
26...	1053	5.4	11	350	4.2	57	96	100	--	--
26...	1100	2.5	11	350	4.6	56	96	100	--	--
26...	1110	7.6	8.0	490	4.4	52	96	97	98	100
26...	1117	7.2	8.0	490	4.0	55	98	99	100	--
26...	1124	6.7	8.0	490	4.1	56	97	100	--	--
26...	1131	5.7	8.0	490	4.0	56	96	100	--	--
26...	1138	4.0	8.0	490	4.4	56	98	99	100	--
26...	1145	1.9	8.0	490	4.8	58	98	100	--	--
26...	1200	7.8	8.2	680	3.3	52	86	95	100	--
26...	1207	7.4	8.2	680	2.7	53	93	96	100	--
26...	1214	6.8	8.2	680	2.7	53	95	98	100	--
26...	1221	5.9	8.2	680	3.2	55	95	98	100	--
26...	1228	4.1	8.2	680	3.4	56	96	100	--	--
26...	1235	1.9	8.2	680	3.9	56	96	100	--	--
30...	0950	11	11	390	4.2	46	86	89	91	100
30...	0955	10	11	390	2.6	47	85	91	100	--
30...	1000	9.0	11	390	3.4	50	94	99	100	--

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	SAMPLING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOCATION (FT)	STREAM VELOCITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM
APR											
30...	1005	8.1	11	390	3.6	53	92	97	100	--	--
30...	1010	5.7	11	390	4.5	52	95	98	100	--	--
30...	1015	2.2	11	390	5.1	53	100	--	--	--	--
30...	1050	9.7	10	525	4.1	45	92	95	98	100	--
30...	1055	9.0	10	525	2.7	47	86	89	99	100	--
30...	1100	8.1	10	525	3.3	44	85	91	99	100	--
30...	1105	7.1	10	525	4.1	52	88	94	100	--	--
30...	1110	5.0	10	525	4.5	50	89	94	99	100	--
30...	1115	2.0	10	525	5.0	53	91	96	99	99	100
30...	1150	8.6	9.0	710	3.6	49	91	95	99	100	--
30...	1155	8.1	9.0	710	2.9	--	82	88	99	100	--
30...	1200	7.2	9.0	710	2.9	42	88	94	99	100	--
30...	1205	6.4	9.0	710	3.1	47	86	93	99	100	--
30...	1210	4.5	9.0	710	3.9	--	89	95	100	--	--
30...	1215	1.8	9.0	710	4.4	47	93	98	100	--	--
MAY											
21...	1030	6.6	7.0	325	2.7	--	78	100	--	--	--
21...	1035	5.8	7.0	325	2.2	--	74	100	--	--	--
21...	1040	5.0	7.0	325	2.8	--	70	100	--	--	--
21...	1045	3.5	7.0	325	2.6	--	80	100	--	--	--
21...	1050	1.6	7.0	325	3.1	--	80	100	--	--	--
21...	1120	7.2	7.6	410	2.9	--	84	100	--	--	--
21...	1125	6.3	7.6	410	2.5	--	71	100	--	--	--
21...	1130	5.4	7.6	410	2.7	--	76	100	--	--	--
21...	1140	1.8	7.6	410	3.3	--	78	100	--	--	--
21...	1205	3.7	4.1	635	.8	--	88	100	--	--	--
JUN											
03...	1035	8.0	8.4	355	3.9	--	98	100	--	--	--
03...	110[illegible]	5.3	5.7	480	3.5	--	95	100	--	--	--
03...	1130	4.8	5.2	680	2.3	--	98	100	--	--	--
17...	0945	4.8	5.7	325	2.7	--	74	100	--	--	--
17...	1045	3.0	3.4	430	2.2	--	71	100	--	--	--
17...	1145	1.0	1.4	710	.8	--	88	100	--	--	--
JUL											
01...	1040	7.4	7.8	350	2.2	73	97	100	--	--	--
01...	1110	4.4	4.8	460	2.6	78	98	100	--	--	--
01...	1140	2.7	3.1	750	2.6	74	97	100	--	--	--
16...	1245	4.3	4.7	360	2.7	--	94	100	--	--	--
16...	1250	3.4	4.7	360	2.2	--	89	100	--	--	--
16...	1255	2.9	4.7	360	2.6	--	92	100	--	--	--
16...	1300	2.2	4.7	360	2.7	--	92	100	--	--	--
16...	1305	1.0	4.7	360	3.3	--	95	100	--	--	--

DATE	TIME	SAMPLING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOCATION (FT)	STREAM VELOCITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
JUL							
16...	1310	5.0	5.4	475	2.4	91	100
16...	1315	4.2	5.4	475	2.2	94	100
16...	1320	3.6	5.4	475	2.2	95	100
16...	1325	2.7	5.4	475	2.4	96	100
16...	1330	1.3	5.4	475	2.6	96	100
16...	1335	1.1	1.5	730	1.7	94	100
29...	1040	4.9	5.3	365	2.3	95	100
29...	1100	2.8	3.2	500	2.4	92	100
29...	1120	2.2	2.6	695	1.9	85	100
AUG							
12...	1115	2.1	2.5	375	1.3	82	100
12...	1155	1.3	1.7	535	2.0	97	100
12...	1235	.7	1.1	700	1.6	98	100
27...	0930	.3	.70	380	1.5	100	--
27...	1000	1.5	1.9	505	2.0	97	100
27...	1030	.3	.70	710	.8	98	100
SEP							
10...	1020	.9	1.3	330	2.1	96	100
10...	1100	1.3	1.7	440	2.4	95	100
10...	1150	1.9	2.3	510	1.9	95	100
23...	1025	1.3	1.7	325	1.8	89	100
23...	1040	1.5	1.9	485	1.8	96	100
23...	1100	.3	.70	725	.8	98	100

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	NUMBER OF SAMPLING POINTS	MEAN DEPTH (FT)	CROSS SECTION LOCATION (FT)	STREAM VELOCITY (FPS)	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
OCT								
10...	1045	1	1.1	430	1.4	62	--	0
10...	1115	1	1.7	695	1.6	64	--	0
10...	1145	1	1.8	745	1.9	62	--	0
23...	1420	1	1.0	490	2.1	143	--	0
23...	1440	1	1.4	650	1.7	61	--	0
23...	1505	1	1.0	765	1.5	62	--	0
NOV								
06...	1040	1	1.8	420	2.1	86	--	0
06...	1130	1	2.1	565	1.7	104	--	0
06...	1200	1	4.0	780	1.3	123	0	1
21...	1435	1	1.1	600	1.7	50	--	0
21...	1515	1	1.4	660	2.2	49	--	0
21...	1540	1	1.6	760	1.9	79	--	0
DEC								
04...	1405	1	1.7	360	2.2	195	--	0
04...	1440	1	2.8	560	2.4	189	--	0
04...	1535	1	2.9	690	2.5	192	0	12
MAR								
05...	1330	1	4.6	335	2.6	--	--	--
05...	1345	1	4.6	415	2.7	--	--	0
05...	1400	1	2.4	535	2.0	--	--	--
18...	0955	1	5.0	360	2.6	60	--	--
18...	1035	1	4.1	450	2.4	59	--	0
18...	1110	1	3.5	750	.8	62	27	49
APR								
01...	1335	1	5.5	315	2.6	51	--	0
01...	1405	1	2.8	390	2.4	52	--	0
01...	1450	1	.70	670	1.3	56	--	0
16...	1015	1	4.8	320	3.0	132	--	0
16...	1100	1	3.1	405	3.1	121	--	--
16...	1145	1	1.9	560	1.8	146	--	0
30...	0950	1	11	390	4.2	1340	--	0
30...	1050	1	10	525	4.1	1170	--	0
30...	1150	1	9.0	710	3.6	1320	--	0
MAY								
21...	1030	1	7.0	325	2.7	232	--	0
21...	1120	1	7.6	410	2.9	134	0	1
21...	1205	1	4.1	635	.8	95	0	16
JUN								
03...	1035	1	8.4	355	3.9	662	--	0
03...	1100	1	5.7	480	3.5	756	--	0
03...	1130	1	5.2	680	2.3	653	0	1
17...	0945	1	5.2	325	2.7	137	--	0
17...	1045	1	3.4	430	2.2	139	--	0
17...	1145	1	1.4	710	.8	112	0	1

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
OCT							
10...	4	27	50	70	94	100	--
10...	14	42	72	86	98	100	--
10...	34	75	88	94	98	100	--
23...	7	39	54	78	98	100	--
23...	14	71	93	99	100	--	--
23...	12	62	86	95	99	100	--
NOV							
06...	7	46	74	82	95	100	--
06...	17	50	80	91	99	100	--
06...	18	65	93	98	100	--	--
21...	5	49	87	98	100	--	--
21...	3	37	79	93	99	100	--
21...	7	53	84	93	98	100	--
DEC							
04...	1	29	80	99	100	--	--
04...	3	24	68	84	97	100	--
04...	34	70	74	90	98	100	--
MAR							
05...	0	8	54	80	96	100	--
05...	2	34	82	92	97	99	100
05...	0	25	86	96	99	100	--
18...	0	27	80	92	90	100	--
18...	20	58	95	99	100	--	--
18...	78	90	99	100	--	--	--
APR							
01...	1	11	72	90	98	100	--
01...	3	47	84	95	99	100	--
01...	7	31	83	94	100	--	--
16...	2	32	64	83	97	100	--
16...	0	10	59	82	98	100	--
16...	14	89	97	98	99	100	--
30...	2	63	92	98	100	--	--
30...	6	34	80	93	99	100	--
30...	6	32	74	91	99	100	--
MAY							
21...	48	87	95	95	100	100	--
21...	14	38	75	87	96	99	100
21...	40	66	92	99	100	--	--
JUN							
03...	2	12	39	64	93	100	--
03...	4	30	63	87	96	99	100
03...	38	65	80	92	99	100	--
17...	3	68	97	99	100	--	--
17...	2	61	98	100	--	--	--
17...	6	79	86	99	100	--	--

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	NUMBER OF SAM-PLING POINTS	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS-PENDED SEDI-MENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
JUL								
01...	1040	1	7.8	350	2.2	622	--	0
01...	1110	1	4.8	460	2.6	665	--	0
01...	1140	1	3.1	750	2.6	648	--	0
16...	1245	1	4.7	360	2.7	196	--	0
16...	1310	1	5.4	475	2.4	189	--	0
16...	1335	1	1.5	730	1.7	198	--	0
16...	1340	1	4.6	305	2.4	--	--	--
16...	1345	1	3.6	360	2.7	--	--	0
16...	1350	1	4.7	350	2.7	--	--	0
16...	1355	1	3.9	390	3.4	--	--	0
16...	1400	1	3.6	415	3.2	--	--	0
16...	1405	1	4.2	445	2.9	--	--	0
16...	1410	1	5.4	475	2.4	--	--	0
16...	1415	1	3.8	510	1.4	--	0	9
16...	1420	1	3.0	570	2.6	--	--	0
16...	1425	1	3.2	630	2.7	--	--	0
16...	1430	1	1.7	700	2.0	--	--	0
16...	1440	1	6.1	740	2.2	--	--	0
29...	1040	1	5.3	365	2.3	178	--	0
29...	1100	1	3.2	500	2.8	116	--	0
29...	1120	1	2.6	695	1.9	122	0	4
AUG								
12...	1115	1	2.5	375	1.3	10[illegible]	--	0
12...	1155	1	1.7	535	2.0	91	--	0
12...	1235	1	1.1	700	1.6	85	--	0
27...	0930	1	.70	380	1.8	98	--	0
27...	1000	1	1.9	595	2.0	88	--	0
27...	1030	1	.70	710	.8	105	--	0
SEP								
10...	1020	1	1.3	330	2.1	94	--	0
10...	1100	1	1.7	440	2.4	106	--	0
10...	1150	1	2.3	510	1.9	91	--	0
23...	1025	1	1.7	325	1.8	97	--	0
23...	1040	1	1.9	495	1.8	94	--	0
23...	1100	1	.70	725	.8	92	--	--

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JUL								
01...	2	63	97	100	--	--	--	--
01...	1	14	55	77	98	100	--	--
01...	1	32	68	87	98	100	--	--
16...	5	26	50	74	97	100	--	--
16...	4	11	39	61	87	98	100	--
16...	16	66	89	98	100	--	--	--
16...	0	19	68	87	98	99	100	--
16...	13	77	97	99	100	--	--	--
16...	5	26	50	74	97	100	--	--
16...	2	26	62	81	97	100	--	--
16...	2	8	22	67	89	100	--	--
16...	20	30	93	99	100	--	--	--
16...	4	11	39	61	87	98	100	--
16...	67	77	90	97	100	--	--	--
16...	5	25	51	83	98	100	--	--
16...	3	44	84	95	99	100	--	--
16...	19	84	93	98	100	--	--	--
16...	11	71	94	99	100	--	--	--
29...	11	50	67	78	93	98	98	100
29...	17	55	80	91	98	100	--	--
29...	49	81	92	99	100	--	--	--
AUG								
12...	3	40	74	87	98	100	--	--
12...	15	55	85	94	99	100	--	--
12...	5	18	79	96	100	--	--	--
27...	1	24	71	88	98	100	--	--
27...	1	30	59	78	95	100	--	--
27...	4	55	93	99	100	--	--	--
SEP								
10...	3	23	52	73	94	100	--	--
10...	10	32	53	68	90	99	100	--
10...	7	39	71	84	98	100	--	--
23...	1	15	62	84	98	100	--	--
23...	3	52	92	98	100	--	--	--
23...	0	2	46	92	99	100	--	--

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMPLING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOCATION (FT)	STREAM VELOCITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
OCT								
07...	1225	1.1	1.5	335	1.5	--	93	100
07...	1325	1.1	1.5	495	1.9	--	81	100
07...	1425	1.5	1.9	745	1.6	--	81	100
20...	1015	1.0	1.4	325	1.7	--	93	100
20...	1100	1.0	1.4	480	2.2	--	95	100
20...	1155	1.4	1.8	605	2.0	--	95	100
NOV								
04...	1345	.6	1.0	360	1.7	--	99	100
04...	1425	1.1	1.5	460	2.1	--	94	100
04...	1500	1.8	2.2	630	1.9	--	88	100
18...	1355	.8	1.2	380	2.4	--	93	100
18...	1430	1.1	1.5	620	1.8	--	96	100
18...	1515	.2	.60	720	.7	--	97	100
MAR								
01...	1345	1.7	2.1	315	2.2	--	86	100
01...	1430	1.2	1.6	495	1.8	--	78	100
01...	1515	1.9	2.3	655	1.9	--	79	100
17...	0935	1.3	1.7	320	2.2	--	76	100
17...	1020	.9	1.3	440	1.9	--	70	100
17...	1100	1.4	1.8	670	2.2	--	87	100
31...	1400	1.6	2.0	320	2.3	--	77	100
31...	1440	.9	1.3	490	2.1	--	79	100
31...	1520	1.5	1.9	645	1.6	--	70	100
APR								
21...	1125	1.3	1.7	470	2.0	--	74	100
21...	1210	1.7	2.1	695	1.0	--	65	100
MAY								
06...	1035	3.9	4.3	310	2.6	--	92	100
06...	1120	1.5	1.9	350	1.8	--	94	100
06...	1210	1.1	1.5	510	1.8	--	92	100
24...	0915	8.0	8.4	345	2.8	67	99	100
24...	0925	7.6	8.4	345	2.5	69	97	100
24...	0935	7.8	8.4	345	2.5	66	98	100
24...	0940	6.0	8.4	345	3.0	72	98	100

DATE	TIME	SAMPLING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOCATION (FT)	STREAM VELOCITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
MAY										
24...	0950	4.2	8.4	345	2.7	67	98	100	--	--
24...	0955	1.9	8.4	345	2.6	70	98	100	--	--
24...	1030	5.4	5.8	510	3.4	62	98	100	--	--
24...	1035	4.8	5.8	510	3.1	67	98	100	--	--
24...	1040	4.5	5.8	510	3.0	67	97	100	--	--
24...	1045	3.9	5.8	510	3.4	67	98	100	--	--
24...	1050	2.9	5.8	510	3.7	66	98	100	--	--
24...	1055	1.3	5.8	510	3.8	59	98	100	--	--
24...	1120	5.9	6.3	720	2.6	64	97	100	--	--
24...	1130	5.8	6.3	720	2.3	64	96	98	100	--
24...	1135	5.3	6.3	720	2.3	63	95	98	100	--
24...	1140	4.6	6.3	720	2.2	66	98	100	--	--
24...	1145	3.2	6.3	720	2.6	64	98	99	100	--
24...	1150	1.5	6.3	720	2.9	69	97	100	--	--
JUN										
03...	0945	9.4	9.8	360	3.9	63	97	100	--	--
03...	1000	2.3	9.8	360	4.4	66	97	100	--	--
03...	1005	4.9	9.8	360	4.0	65	97	100	--	--
03...	1010	7.0	9.8	360	3.4	66	96	100	--	--
03...	1015	9.2	9.8	360	3.4	63	96	100	--	--
03...	1020	8.8	9.8	360	3.0	65	97	98	99	100
03...	1100	9.0	9.4	500	3.8	58	96	98	100	--
03...	1115	2.2	9.4	500	4.6	65	98	100	--	--
03...	1120	4.7	9.4	500	4.3	61	98	100	--	--
03...	1125	6.7	9.4	500	3.9	62	98	100	--	--
03...	1130	7.8	9.4	500	3.0	67	95	96	100	--
03...	1135	8.5	9.4	500	3.2	69	94	96	98	100
03...	1155	6.6	7.0	700	3.7	59	96	98	99	100
03...	1200	1.6	7.0	700	4.2	63	98	100	--	--
03...	1205	3.5	7.0	700	3.9	62	98	100	--	--
03...	1210	5.0	7.0	700	3.1	62	97	100	--	--
03...	1215	5.8	7.0	700	3.1	67	93	100	--	--
03...	1220	6.3	7.0	700	3.2	59	93	98	100	--
16...	0910	2.7	3.1	350	1.8	--	97	100	--	--

06892350 KANSAS RIVER.AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMP-LING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM
JUN											
16...	1015	3.8	4.2	465	2.3	--	80	84	84	100	--
16...	1105	5.0	5.4	560	1.5	--	83	100	--	--	--
21...	1500	14	15	400	2.8	54	91	95	98	100	--
21...	1505	13	15	400	3.3	57	94	97	100	--	--
21...	1510	12	15	400	3.7	60	96	98	100	--	--
21...	1520	11	15	400	4.3	58	94	98	100	--	--
21...	1525	7.4	15	400	4.5	60	97	98	100	--	--
21...	1535	3.4	15	400	5.2	62	95	100	--	--	--
21...	1540	14	15	400	4.5	62	98	100	--	--	--
21...	1545	15	16	540	3.3	53	93	97	99	100	--
21...	1550	15	16	540	3.3	55	92	96	100	--	--
21...	1555	14	16	540	4.1	57	93	98	100	--	--
21...	1600	12	16	540	4.1	53	92	99	100	--	--
21...	1605	8.1	16	540	4.6	57	94	99	100	--	--
21...	1610	3.7	16	540	5.4	57	95	99	100	--	--
21...	1620	16	16	540	4.8	55	93	98	100	--	--
21...	1630	14	15	760	3.1	46	80	85	88	98	100
21...	1635	13	15	760	3.2	54	92	95	96	100	--
21...	1640	11	15	760	3.9	56	94	98	99	100	--
21...	1645	7.8	15	760	4.5	53	99	100	--	--	--
21...	1650	3.6	15	760	5.4	58	98	100	--	--	--
21...	1655	15	15	760	4.7	58	96	99	100	--	--
24...	1350	12	13	395	2.8	50	95	98	100	--	--
24...	1355	11	13	395	3.0	54	94	99	100	--	--
24...	1400	10	13	395	3.3	60	96	98	100	--	--
24...	1405	9.4	13	395	4.0	54	91	100	--	--	--
24...	1410	6.6	13	395	4.4	57	97	100	--	--	--
24...	1420	3.1	13	395	4.8	56	95	100	--	--	--
24...	1425	13	13	395	4.0	56	92	100	--	--	--
24...	1430	13	14	590	2.9	45	82	90	100	--	--
24...	1435	12	14	590	3.3	70	91	100	--	--	--
24...	1440	11	14	590	4.6	48	89	96	100	--	--
24...	1445	9.7	14	590	3.5	53	89	95	100	--	--
24...	1450	6.8	14	590	4.3	57	95	98	100	--	--

DATE	TIME	SAMP-LING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
JUN												
24...	1500	3.1	14	590	[illegible]	52	91	100	--	--	--	--
24...	1515	13	14	590	4.7	51	94	99	100	--	--	--
24...	1530	11	12	770	2.6	52	82	86	90	98	98	100
24...	1535	10	12	[illegible]	3.4	52	92	96	98	100	--	--
24...	1540	8.7	12	770	4.2	49	93	94	98	100	--	--
24...	1550	6.1	12	770	4.4	53	95	98	99	100	--	--
24...	1600	2.8	12	770	5.1	56	96	99	100	--	--	--
24...	1610	12	12	770	4.2	62	88	91	92	98	100	--
JUL												
29...	0940	4.3	4.7	320	2.7	--	86	100	--	--	--	--
29...	1010	6.1	6.5	400	1.9	--	90	100	--	--	--	--
29...	1050	1.6	2.0	750	2.2	--	86	100	--	--	--	--
AUG												
19...	0930	6.9	7.3	350	--	--	98	100	--	--	--	--
19...	1010	2.2	2.6	530	--	--	96	100	--	--	--	--
19...	1045	3.6	4.0	725	--	--	95	100	--	--	--	--
SEP												
08...	1000	8.6	9.0	425	3.2	52	89	93	100	--	--	--
08...	1005	8.1	9.0	425	2.9	--	71	76	98	100	--	--
08...	1010	7.5	9.0	425	3.1	--	78	84	100	--	--	--
08...	1015	6.4	9.0	425	3.1	--	88	94	100	--	--	--
08...	1020	4.5	9.0	425	3.3	--	92	100	--	--	--	--
08...	1025	2.1	9.0	425	3.6	--	90	100	--	--	--	--
08...	1120	10	10	595	3.4	51	85	91	100	--	--	--
08...	1125	9.4	10	595	2.7	--	69	77	100	--	--	--
08...	1130	8.7	10	595	2.6	--	74	80	98	100	--	--
08...	1135	7.4	10	595	3.3	--	81	89	100	--	--	--
08...	1140	5.2	10	595	3.5	--	85	94	100	--	--	--
08...	1145	2.4	10	595	4.1	--	87	100	--	--	--	--
08...	1205	14	16	720	3.1	--	88	100	--	--	--	--
08...	1210	14	16	720	2.1	--	76	85	100	--	--	--
08...	1215	13	16	720	3.3	--	72	81	94	100	--	--
08...	1220	11	16	720	3.8	--	87	96	100	--	--	--
08...	1225	7.7	16	720	3.8	--	77	100	--	--	--	--

DATE	TIME	SAMP-LING DEPTH (FT)	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
SEP										
08...	1230	3.6	16	720	4.6	--	88	96	100	--
08...	1240	15	16	720	4.2	53	90	96	100	--
29...	1100	3.4	3.8	470	--	--	73	76	81	100
29...	1135	11	11	650	--	--	90	100	--	--
29...	1200	14	15	755	--	--	94	100	--	--

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAM-PLING POINTS	MEAN DEPTH (FT)	CROSS SECTION LOC-ATION (FT)	STREAM VELOC-ITY (FPS)	SUS-PENDED SEDI-MENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
OCT								
07...	1225	1	1.5	335	1.5	82	--	0
07...	1325	1	1.5	495	1.9	84	--	--
07...	1425	1	1.9	745	1.6	82	--	0
20...	1015	1	1.4	325	1.7	155	--	--
20...	1100	1	1.4	480	2.2	143	--	0
20...	1155	1	1.8	605	2.0	149	--	--
NOV								
04...	1345	1	1.0	340	1.7	282	--	0
04...	1425	1	1.5	460	2.1	127	--	0
04...	1500	1	2.2	630	1.9	126	--	0
18...	1355	1	1.2	380	2.4	42	--	0
18...	1430	1	1.5	520	1.8	59	--	0
18...	1515	1	.60	720	.7	61	0	12
MAR								
01...	1345	1	2.1	315	2.2	56	--	0
01...	1430	1	1.6	495	1.8	51	--	0
01...	1515	1	2.3	655	1.9	55	--	0
17...	0935	1	1.7	320	2.2	71	--	0
17...	1020	1	1.3	480	1.9	70	--	0
17...	1100	1	1.8	670	2.2	59	--	0
31...	1400	1	2.0	320	2.3	55	--	0
31...	1440	1	1.3	490	2.1	57	--	0
31...	1520	1	1.9	645	1.6	70	--	0
APR								
21...	1035	1	3.1	320	2.5	37	--	0
21...	1125	1	1.7	470	2.0	136	--	0
21...	1210	1	2.1	695	1.0	124	--	0
MAY								
06...	1035	1	4.3	310	2.6	235	--	0
06...	1120	1	1.9	350	1.8	287	--	0
06...	1210	1	1.5	510	1.8	291	0	1
24...	0915	1	8.4	345	2.8	3910	--	0
24...	1030	1	5.8	510	3.4	4130	--	0
24...	1120	1	6.3	720	2.6	4380	--	0
JUN								
03...	0925	1	7.2	285	3.2	--	--	0
03...	0935	1	9.6	320	3.7	--	--	--
03...	0945	1	9.8	360	3.9	2900	--	0
03...	1030	1	8.9	405	4.1	--	--	0
03...	1040	1	8.7	455	4.3	--	--	--
03...	1100	1	9.4	500	3.8	2790	--	0
03...	1140	1	11	545	3.3	--	--	0
03...	1145	1	6.8	590	4.1	--	--	0
03...	1150	1	7.4	640	3.6	--	--	0

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
OCT								
07...	4	27	57	76	94	100	--	--
07...	0	17	75	92	100	--	--	--
07...	4	57	92	98	100	--	--	--
20...	0	11	29	52	89	100	--	--
20...	4	77	92	97	100	--	--	--
20...	0	17	75	88	97	100	--	--
NOV								
04...	1	2	3	6	16	40	82	100
04...	9	39	60	86	98	100	--	--
04...	8	54	85	94	98	100	--	--
18...	1	10	41	74	92	99	100	--
18...	7	40	80	93	99	100	--	--
18...	10	37	69	86	98	100	--	--
MAR								
01...	3	60	89	96	100	--	--	--
01...	4	22	48	67	90	100	--	--
01...	19	52	77	89	100	--	--	--
17...	2	41	77	93	99	100	--	--
17...	2	26	56	78	97	100	--	--
17...	6	45	79	93	98	100	--	--
31...	3	30	70	85	96	100	--	--
31...	3	15	47	73	97	100	--	--
31...	3	26	54	90	100	--	--	--
APR								
21...	2	37	70	87	98	100	--	--
21...	6	21	36	51	76	97	100	--
21...	11	42	77	91	100	--	--	--
MAY								
06...	3	58	91	67	99	100	--	--
06...	10	48	58	77	93	99	100	--
06...	13	41	62	80	97	100	--	--
24...	4	46	79	91	99	100	--	--
24...	5	31	80	92	98	100	--	--
24...	15	76	98	99	100	--	--	--
JUN								
03...	10	60	83	94	99	100	--	--
03...	0	6	51	74	93	99	100	--
03...	1	13	65	92	99	100	--	--
03...	2	32	62	79	95	99	100	--
03...	0	13	58	75	90	95	98	100
03...	1	26	83	94	99	100	--	--
03...	12	73	84	95	98	100	--	--
03...	2	50	83	93	99	100	--	--
03...	2	21	60	82	97	99	100	--

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	MEAN DEPTH (FT)	CROSS SECTION LOCATION (FT)	STREAM VELOCITY (FPS)	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
JUN								
03...	1155	1	7.0	700	3.7	2830	--	0
03...	1225	1	9.0	750	3.1	--	--	0
03...	1230	1	10	800	3.2	--	--	0
16...	0910	1	3.1	350	1.8	403	--	--
16...	1015	1	4.2	465	2.3	423	0	1
16...	1105	1	5.4	540	1.5	326	3	6
21...	1540	1	15	400	4.5	2610	--	0
21...	1620	1	16	540	4.8	3120	0	1
21...	1655	1	15	760	4.7	3280	--	--
24...	1425	1	13	395	4.0	1620	--	0
24...	1515	1	14	590	4.7	1710	--	0
24...	1610	1	12	770	4.2	1920	--	0
JUL								
08...	1015	1	10	350	2.3	--	0	2
08...	1105	1	8.2	500	2.8	--	1	7
08...	1205	1	5.1	690	2.6	--	0	1
29...	0940	1	4.7	320	2.7	105	--	0
29...	1010	1	6.5	400	1.9	80	--	0
29...	1050	1	2.0	750	2.2	94	--	0
AUG								
19...	0930	1	7.3	350	--	364	--	0
19...	1010	1	2.6	530	--	396	--	0
19...	1045	1	4.0	725	--	388	--	0
SEP								
08...	1000	1	9.0	425	3.2	583	0	1
08...	1120	1	10	595	3.4	648	--	0
08...	1240	1	16	720	4.2	598	--	0
29...	1100	1	3.8	470	--	326	--	0
29...	1135	1	11	650	--	25	0	1
29...	1200	1	15	755	--	24	--	0

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JUN								
03...	6	68	86	93	97	98	100	--
03...	8	83	99	100	--	--	--	--
03...	1	90	97	99	100	--	--	--
16...	0	4	56	86	97	100	--	--
16...	25	54	77	87	97	94	100	--
16...	12	40	86	97	100	--	--	--
21...	2	14	58	74	93	100	--	--
21...	13	33	75	92	99	100	--	--
21...	0	17	81	96	100	--	--	--
24...	5	44	95	99	100	--	--	--
24...	7	28	75	91	98	100	--	--
24...	1	30	68	91	99	100	--	--
JUL								
08...	23	40	53	76	98	100	--	--
08...	87	98	99	100	--	--	--	--
08...	50	81	92	98	99	100	--	--
29...	32	74	84	91	98	100	--	--
29...	40	78	92	98	100	--	--	--
29...	4	52	84	97	100	--	--	--
AUG								
19...	7	22	45	69	93	98	99	100
19...	16	62	84	95	99	100	--	--
19...	6	70	92	97	99	99	100	--
SEP								
08...	19	46	78	90	97	100	--	--
08...	10	60	92	99	100	--	--	--
08...	8	33	67	83	96	99	100	--
29...	4	70	99	100	--	--	--	--
29...	35	71	89	97	100	--	--	--
29...	15	51	72	86	95	97	98	100

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)
OCT		
07...	1225	82
07...	1325	84
07...	1425	82
20...	1015	155
20...	1100	143
20...	1155	149
NOV		
04...	1345	242
04...	1425	127
04...	1500	126
18...	1355	42
18...	1430	59
18...	1515	61
MAR		
01...	1345	56
01...	1430	51
01...	1515	55
17...	0935	71
17...	1020	70
17...	1100	59
31...	1400	55
31...	1440	57
31...	1520	70
APR		
21...	1035	37
21...	1125	136
21...	1210	124
MAY		
06...	1035	235
06...	1120	287
06...	1210	291
24...	0915	3910
24...	0925	4010
24...	0935	3920
24...	0940	3840
24...	0950	4080
24...	0955	4030
24...	1030	4130
24...	1035	4250
24...	1040	4300
24...	1045	4250
24...	1050	4050
24...	1055	5380
24...	1120	4380
24...	1130	5050
24...	1135	4720
24...	1140	4170
24...	1145	4360
24...	1150	4160
JUN		
03...	0945	2900
03...	1000	2790
03...	1005	2790
03...	1010	2950
03...	1015	2830
03...	1020	2900
03...	1100	2790
03...	1115	2930
03...	1120	2950
03...	1125	3000
03...	1130	2890
03...	1135	3100
03...	1155	2830
03...	1200	2770
03...	1205	2720
03...	1210	2960
03...	1215	2870
03...	1220	3140
16...	0910	403
16...	1015	423
16...	1105	326
21...	1500	3050
21...	1505	2880
21...	1510	2710
21...	1520	2610
21...	1525	2530
21...	1535	2520
21...	1540	2610
21...	1545	3140
21...	1550	3100
21...	1555	3060
21...	1600	3430
21...	1605	2990

06892350 KANSAS RIVER AT DESOTO, KS--Continued
(National stream-quality accounting network and pesticide station)

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)
JUN		
21...	1610	2900
21...	1620	3120
21...	1630	3700
21...	1635	3360
21...	1640	3270
21...	1645	2920
21...	1650	3040
21...	1655	3280
24...	1350	2030
24...	1355	1740
24...	1400	1520
24...	1405	1620
24...	1410	1710
24...	1420	1530
24...	1425	1620
24...	1430	2160
24...	1435	1810
24...	1440	1960
24...	1445	1810
24...	1450	1800
24...	1500	1640
24...	1515	1710
24...	1530	1740
24...	1535	1370
24...	1540	1340
24...	1550	1320
24...	1600	1270
24...	1610	1920
JUL		
29...	0940	105
29...	1010	80
29...	1050	94
AUG		
19...	0930	364
19...	1010	396
19...	1045	388
SEP		
08...	1000	583
08...	1005	776
08...	1010	540
08...	1015	595
08...	1020	568
08...	1025	569
08...	1120	648
08...	1125	809
08...	1130	752
08...	1135	683
08...	1140	647
08...	1145	611
08...	1205	590
08...	1210	746
08...	1215	784
08...	1220	642
08...	1225	724
08...	1230	648
08...	1240	598
29...	1100	326
29...	1135	25
29...	1200	24

06893000 MISSOURI RIVER AT KANSAS CITY, MO

LOCATION.--Lat 39°06'43", long 94°35'16", in sec.32, T.50 N., R.33 W., Jackson County, Hydrologic Unit 10300101, on downstream side of right pier of Chicago, Burlington, & Quincy Railroad bridge at Kansas City, 1.4 mi (2.3 km) downstream from Kansas River. River mile, 366.1 (589.1 km).

DRAINAGE AREA.--485,200 mi² (1,257,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1897 to current year. Prior to August 1928 monthly discharge only, published in WSP 1310. Gage-height records collected at same site 1873-99 are contained in reports of Missouri River Commission; those since 1900 are contained in reports of National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 716.40 ft (218.359 m) above mean sea level. Prior to May 4, 1931, nonrecording gage, and May 4, 1931, to Aug. 23, 1934, water-stage recorder, at present site and datum. Aug. 24, 1934, to May 15, 1947, water-stage recorder at site 200 ft (61.0 m) upstream at same datum. May 16, 1947, to Feb. 28, 1948, nonrecording gage at present site and datum.

REMARKS.--Records good. Discharge measurements made weekly except during ice-flow periods. Some regulation from many upstream reservoirs. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--80 years (1898-1977), 54,580 ft³/s (1,546 m³/s), 39,540,000 acre-ft/yr (48,750 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 573,000 ft³/s (16,230 m³/s) July 14, 1951; maximum gage height, 36.2 ft (11.03 m) July 14, 1951; minimum discharge, about 1,500 ft³/s (42.5 m³/s) Jan. 9, 10, 1937; minimum gage height, -2.91 ft (-0.887 m), Jan. 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 38.0 ft (11.58 m) June 16, 1844, discharge, about 625,000 ft³/s (17,000 m³/s), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 206,000 ft³/s (5,830 m³/s) Sept. 13, gage height, 22.85 ft (6.965 m); minimum, 8,900 ft³/s (252 m³/s) Jan. 11, gage height, -2.52 ft (0.768 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44100	41200	39300	25000	23900	31300	48000	40700	64200	61600	38800	108000
2	43900	41600	38300	24000	20800	30100	45700	40300	64300	57900	39200	141000
3	43600	41800	38100	22000	17200	29700	43500	40500	63700	53200	39200	130000
4	43600	42200	41200	23600	15100	29100	45800	41200	59800	49 00	40400	138000
5	45500	42600	44600	24500	13200	28900	48000	42300	56300	46600	50900	141000
6	44900	43200	44500	24000	13900	28000	47600	44900	54000	45700	61500	132000
7	44200	42600	40000	24300	16400	27100	45600	48300	51700	46800	59700	105000
8	43900	41700	36300	2 800	19100	27600	43400	46600	47800	48100	54800	87400
9	43400	41200	32700	24900	21400	26800	42400	45700	45700	45700	51500	80100
10	43000	41100	30300	23700	23300	25500	41300	48100	44100	45200	59200	74000
11	42300	41600	27900	14200	24800	26900	40400	45600	43000	48700	73300	64600
12	42100	42000	27200	9570	25500	27800	40900	42700	43800	49600	65100	113000
13	42000	42600	26700	12500	26700	29600	40900	41100	43500	45700	54000	200000
14	42200	43300	26600	20700	27900	31200	40900	40100	45300	44400	46100	186000
15	42600	43500	27000	19300	30000	31400	41200	39300	46800	44800	43200	131000
16	43900	41400	28000	15000	30900	33700	41700	39000	46200	43100	50500	102000
17	43400	40600	28800	15200	30400	34600	42000	39300	46600	43800	66200	97200
18	43200	41600	29100	17400	33800	32000	40300	39400	51100	44000	62300	86300
19	43400	41700	29300	16400	30600	32000	42000	40100	74500	45500	52200	86100
20	43200	41200	29100	16800	30000	33000	43100	57100	99700	46300	50700	81500
21	42200	41300	28300	16500	30400	33600	42100	55300	88500	43000	50600	77200
22	42200	42300	27800	15200	30300	33000	43000	56800	95100	39700	49000	74100
23	42400	42700	27600	15300	51700	37200	44200	55000	89400	40000	51400	73200
24	41700	42300	26200	16800	36500	42700	44400	56700	78500	42000	54700	77900
25	41600	41500	25900	18400	30400	40800	47400	61400	83600	44000	53400	85400
26	42500	40000	27300	20200	30000	38400	44600	56600	87300	43400	52300	76300
27	43200	40500	27800	22300	30000	41300	42900	52000	79100	47100	50900	68100
28	42500	41800	27000	23400	33000	43300	42100	50600	78400	42600	53200	61800
29	42700	42100	26900	23800	---	41900	42200	55600	67000	40300	85900	59500
30	43100	40800	26600	25700	---	44500	42000	65000	65400	43100	71600	58300
31	41600	---	26000	25200	---	46200	---	66700	---	41800	64000	---
TOTAL	1334300	1254100	962400	620070	747200	1039200	1299600	1494000	1896400	1423200	1695000	2996000
MEAN	43040	41800	31050	20030	26690	33520	43320	48190	63210	45910	54700	99870
MAX	45500	43500	44600	25700	51700	46200	48000	66700	99700	61600	85900	200000
MIN	41600	40000	25900	9570	13200	25500	40300	39000	43000	39700	38800	58300
AC-FT	2647000	2488000	1909000	1231000	1482000	2061000	2578000	2963000	3762000	2823000	3364000	5943000

CAL YR 1976 TOTAL 16995000 MEAN 46430 MAX 113000 MIN 18800 AC-FT 33710000
WTR YR 1977 TOTAL 16763070 MEAN 45930 MAX 200000 MIN 9570 AC-FT 33250000

06893080 BLUE RIVER NEAR STANLEY, KS

LOCATION.--Lat 38°48'45", long 94°40'31", in SW¼SW¼SE¼ sec.19, T.14 S., R.25 E., Johnson County, Hydrologic Unit 10300001, on left bank at downstream side of northbound bridge on U.S. Highway 69, 0.5 mi (0.8 km) downstream from confluence of Wolf and Coffee Creeks, and 3.0 mi (4.8 km) south of Stanley.

DRAINAGE AREA.--46 mi² (119 km²) approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1970-74. October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 886.05 ft (270.068 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1974, crest-stage gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s (212 m³/s) June 9, 1974, gage height, 16.83 ft (5.130 m). October 1974 to current year: Minimum discharge, no flow at times in 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 12	0715	* 2,500	70.8	11.58	3.530
June 21	2045	2,020	57.2	10.66	3.249

Minimum discharge, no flow Oct. 1-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.12	.06	.02	.02	.39	1.5	1.7	77	18	.14	.09
2	.00	.12	.05	.02	.05	.37	1.7	1.6	85	15	.13	.10
3	.00	.10	.05	.02	.07	.51	1.4	3.3	17	15	.12	.10
4	.00	.09	.05	.02	.07	.57	1.2	71	9.4	11	.09	.09
5	.00	.09	.05	.02	.07	.60	1.0	29	6.5	7.0	.42	.08
6	.00	.09	.04	.02	.07	.60	.95	15	3.8	5.0	.33	.08
7	.00	.09	.04	.03	.07	.60	1.1	11	1.8	8.4	.25	.07
8	.00	.09	.04	.04	.07	.60	1.1	10	1.2	47	.26	.07
9	.00	.09	.04	.04	.07	.60	.76	12	.51	19	.21	.06
10	.00	.08	.04	.04	.50	.58	.73	7.0	.42	12	.17	.06
11	.00	.08	.04	.04	1.9	3.3	.56	4.9	.36	44	.17	.06
12	.00	.08	.04	.04	3.4	17	.54	3.3	581	27	.18	.83
13	.00	.08	.04	.04	1.3	6.6	.88	2.2	34	15	.19	79
14	.00	.08	.04	.05	.70	2.1	1.1	1.7	17	8.9	.18	17
15	.00	.07	.04	.05	.56	1.1	.67	1.3	11	4.1	.14	8.7
16	.00	.07	.04	.05	.43	.60	.57	1.1	7.6	1.7	.15	7.1
17	.00	.07	.04	.05	.29	1.0	.56	1.0	4.5	.86	.16	4.6
18	.00	.07	.04	.05	.26	12	.59	1.1	93	.53	.16	2.1
19	.00	.07	.04	.07	.22	1.8	.70	.85	334	.44	.15	1.4
20	.00	.07	.04	.07	.18	.98	.88	1.6	54	.30	.10	.98
21	.00	.07	.04	.07	.18	.69	2.6	5.6	428	.32	.07	1.0
22	.00	.06	.04	.07	.18	.50	3.7	12	212	.31	.07	1.2
23	.02	.06	.04	.07	.21	.53	3.0	4.3	445	.30	.08	1.1
24	.09	.06	.04	.07	.19	.46	1.9	2.0	295	.30	.08	18
25	.07	.06	.04	.07	.25	.47	1.4	2.5	193	.33	.08	8.1
26	.06	.06	.03	.05	.31	.48	1.4	1.7	93	.27	.08	4.5
27	.06	.07	.03	.03	.33	.48	2.9	1.0	41	.24	.07	2.0
28	.07	.07	.03	.02	.33	1.1	.83	18	43	.24	.10	1.2
29	.07	.06	.04	.02	---	2.5	.55	9.4	31	.22	.16	1.0
30	.08	.06	.04	.02	---	1.9	1.2	7.9	23	.20	.10	1.0
31	.11	---	.02	.02	---	1.2	---	14	---	.16	.09	---
TOTAL	.63	2.33	1.25	1.29	12.68	62.21	37.97	259.05	3143.09	263.12	4.68	161.67
MEAN	.020	.078	.040	.042	.45	2.01	1.27	8.36	105	8.49	.15	5.39
MAX	.11	.12	.06	.07	3.4	17	3.7	71	581	47	.42	79
MIN	.00	.06	.02	.02	.02	.37	.54	.85	.36	.16	.07	.06
AC-FT	1.2	4.6	2.5	2.6	25	123	75	514	6230	522	9.3	321

CAL YR 1976 TOTAL 1741.87 MEAN 4.76 MAX 970 MIN .00 AC-FT 3450
WTR YR 1977 TOTAL 3949.97 MEAN 10.8 MAX 581 MIN .00 AC-FT 7830

06893300 INDIAN CREEK AT OVERLAND PARK, KS

LOCATION.--Lat 38°56'30", long 94°40'10", in NW¼NE¼NE¼ sec.7, T.13 S., R.25 E., Johnson County, Hydrologic Unit 10300001, at downstream side of highway bridge on Marty Street in Overland Park.

DRAINAGE AREA.--26.6 mi² (68.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 856.88 ft (261.177 m) above mean sea level (levels by Corps of Engineers). Prior to May 17, 1977, water-stage recorder at site 700 ft (210 m) downstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--14 years, 24.6 ft³/s (0.697 m³/s), 17,820 acre-ft/yr (22.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,820 ft³/s (250 m³/s) Sept. 13, 1977, gage height, 15.50 ft (4.724 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
July 7	1930	1,210	34.3	9.34	2.847	Sept. 12	2300	6,260	177	15.04	4.584
Sept. 12	0400	2,650	75.0	11.62	3.542	Sept. 13	0100	* 8,820	250	15.50	4.724
Sept. 12	0630	2,790	79.0	11.80	3.597						

Minimum discharge, 0.40 ft³/s (0.011 m³/s) Jan. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	1.6	.53	.45	1.2	.90	1.5	6.0	8.8	3.9	1.5	28
2	.45	1.0	.53	.42	1.3	2.1	1.5	16	34	13	1.9	5.8
3	.45	.79	.66	.40	1.4	5.6	1.2	4.1	7.3	8.3	1.8	3.7
4	5.4	.77	.70	.45	1.6	2.0	2.6	40	4.8	3.9	14	2.9
5	72	.70	.72	.50	1.5	1.6	1.8	36	3.1	2.9	114	2.7
6	4.7	.74	.80	.45	1.4	1.1	1.4	5.1	2.8	2.2	16	2.7
7	1.8	.78	.85	.45	1.4	.96	1.2	3.5	1.9	192	5.4	2.4
8	1.5	.68	.80	.45	5.7	1.4	1.0	20	1.9	113	4.6	2.2
9	1.1	.70	.76	.45	6.[illegible]	1.1	1.0	9.5	1.6	12	3.6	2.1
10	1.1	.70	.74	.54	7.5	.90	1.0	3.0	1.4	7.8	3.4	2.0
11	1.1	.70	.75	.50	6.4	54	1.0	2.2	1.3	63	6.9	2.3
12	1.1	.62	.62	.47	5.6	12	.90	2.2	156	14	6.0	1500
13	1.1	.62	.67	.45	3.5	3.8	9.8	1.9	8.9	7.6	3.8	1380
14	1.0	.62	.63	.52	1.8	2.2	5.3	1.9	5.1	5.5	3.6	55
15	1.0	.62	.66	.56	1.5	1.7	1.7	1.9	3.5	4.4	3.2	36
16	.98	.62	.70	.54	1.4	1.4	1.4	1.9	2.5	4.0	75	37
17	.88	.67	.74	.50	1.2	18	2.0	8.5	3.0	3.4	7.0	18
18	2.5	.74	.79	.50	1.4	20	1.9	3.7	160	2.9	2.4	13
19	3.7	.81	.74	.54	1.3	2.3	1.5	7.5	141	2.6	2.0	9.3
20	2.3	.79	.75	.70	1.1	1.8	16	28	20	2.5	1.7	7.3
21	1.5	.71	.69	.90	.94	1.8	11	41	42	40	1.6	19
22	1.3	.70	.61	1.2	1.2	1.8	2.5	26	64	12	1.6	11
23	62	.70	.53	1.4	1.7	1.6	1.7	56	171	3.2	7.2	38
24	14	.70	.53	1.7	1.5	1.4	1.2	19	34	2.5	2.8	112
25	2.8	.70	.53	2.0	.91	1.3	1.0	16	24	2.2	1.7	15
26	1.9	1.1	.53	1.8	1.1	1.3	.87	5.1	12	2.1	1.4	9.2
27	12	.90	.53	1.7	1.4	2.7	.90	3.8	8.4	1.9	1.3	6.8
28	4.6	.80	.50	1.5	1.2	27	.90	124	8.6	1.9	145	6.0
29	1.4	.70	.50	1.4	---	5.5	.89	34	7.2	4.3	11	5.0
30	8.1	.55	.50	1.3	---	1.9	9.4	40	4.8	2.3	6.9	4.8
31	3.6	---	.48	1.2	---	1.5	---	23	---	1.7	4.9	---
TOTAL	216.81	22.83	20.17	25.94	64.35	182.66	85.86	590.8	944.9	543.0	462.9	3328.9
MEAN	6.99	.76	.65	.84	2.30	5.89	2.86	19.1	31.5	17.5	14.9	111
MAX	72	1.6	.85	2.0	7.5	54	16	124	171	192	145	1500
MIN	.45	.55	.48	.40	.91	.90	.87	1.9	1.3	1.7	1.3	2.0
AC-FT	430	45	40	51	128	362	170	1170	1870	1080	918	6600

CAL YR 1976 TOTAL 2920.73 MEAN 7.98 MAX 681 MIN .15 AC-FT 5790
WTR YR 1977 TOTAL 6489.12 MEAN 17.8 MAX 1500 MIN .40 AC-FT 12870

06893350 TOMAHAWK CREEK NEAR OVERLAND PARK, KS

LOCATION.--Lat 38°54'47", long 94°37'54", in NE¼NE¼NE¼, sec.21, T.13 S., R.25 E., Johnson County, Hydrologic Unit 10300001, on right bank at downstream side of bridge on 119th Street, 1.4 mi (2.3 km) south of Overland Park, 4.4 mi (7.1 km) northeast of Stanley.

DRAINAGE AREA.--23.9 mi² (61.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1970-74. October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 838.15 ft (255.468 m) above mean sea level (levels by Corps of Engineers). Prior to October 1, 1974, crest-stage gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,230 ft³/s (148 m³/s), revised, June 9, 1974, gage height, 18.22 ft (5.553 m). October 1974 to current year: Minimum discharge, 0.01 ft³/s (<0.001 m³/s) Aug. 5, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 4,290 ft³/s (121 m³/s) Sept. 13, gage height 17.74 ft (5.407 m), no other peak above base of 900 ft³/s (25.5 m³/s); minimum, 0.04 ft³/s (0.001 m³/s) Dec. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.33	.14	.12	.20	.31	.82	.64	3.2	1.3	.66	.57
2	.13	.34	.15	.15	.25	.27	.66	2.0	3.5	1.7	.42	.40
3	.13	.30	.13	.15	.35	.37	.58	.60	2.3	1.5	.23	.39
4	.40	.21	.09	.14	.49	.31	.73	2.8	.98	.62	.92	.26
5	.25	.21	.13	.13	.35	.30	.66	5.0	.60	.25	7.7	.26
6	.20	.22	.14	.13	.35	.33	.56	1.0	.27	.26	2.7	.23
7	.12	.22	.13	.15	.30	.35	.52	.50	.22	68	1.4	.20
8	.11	.30	.13	.17	.30	.32	.55	2.5	.15	42	.53	.21
9	.11	.21	.15	.20	.50	.30	.48	1.0	.22	5.6	.57	.21
10	.12	.11	.09	.30	.84	.28	.63	.40	.23	2.8	.31	.19
11	.12	.15	.13	.25	2.6	4.9	.43	.30	.27	64	.68	.18
12	.11	.16	.15	.25	4.0	5.9	.41	.30	39	18	.34	291
13	.11	.16	.13	.25	1.6	1.8	.92	.25	6.9	7.1	.30	817
14	.12	.15	.13	.25	.77	.70	.77	.25	1.2	4.7	.28	27
15	.12	.16	.12	.25	.40	.50	.76	.25	.33	3.0	.38	34
16	.12	.15	.12	.25	.29	.39	.62	.25	.17	2.1	1.1	25
17	.12	.19	.12	.20	.25	2.4	.56	.25	.13	1.4	.35	13
18	.14	.17	.13	.15	.22	9.9	.63	.50	27	.95	.29	8.6
19	.15	.16	.13	.15	.21	2.2	.61	1.0	32	2.6	.29	5.6
20	.14	.14	.14	.15	.20	1.1	2.9	3.0	8.6	1.3	.29	3.9
21	.14	.16	.14	.30	.23	.77	5.9	5.0	33	.58	.28	6.7
22	.15	.29	.15	.30	.28	.52	3.1	3.0	33	.63	.31	5.6
23	4.0	.16	.20	.30	.30	.45	2.1	7.0	88	.92	.44	9.9
24	1.0	.14	.20	.45	.28	.48	1.4	3.0	25	.60	.30	39
25	.39	.17	.15	.40	.31	.39	1.2	1.0	78	.30	.28	9.3
26	.32	.22	.20	.40	.34	.37	.65	.64	15	.24	.29	5.7
27	.57	.22	.25	.40	.35	.53	.60	.31	6.1	.23	.30	4.3
28	.34	.15	.15	.35	.33	4.5	.55	56	7.8	.23	12	3.2
29	.30	.15	.14	.18	---	4.8	.50	17	3.6	.27	2.8	2.8
30	.57	.15	.12	.18	---	1.9	.35	17	2.2	.23	.80	2.8
31	.44	---	.11	.18	---	1.1	---	8.5	---	.21	.37	---
TOTAL	11.12	5.85	4.34	7.23	16.60	48.66	30.89	140.44	408.77	233.08	37.83	1316.80
MEAN	.36	.20	.14	.23	.59	1.57	1.03	4.53	13.6	7.52	1.22	43.9
MAX	4.0	.34	.25	.45	4.0	9.9	5.9	56	88	68	12	817
MIN	.11	.11	.09	.12	.20	.27	.35	.25	.13	.21	.23	.18
AC-FT	22	12	8.7	14	33	97	61	279	811	462	75	2610

CAL YR 1976 TOTAL 463.37 MEAN 1.27 MAX 167 MIN .01 AC-FT 919
WTR YR 1977 TOTAL 2260.78 MEAN 6.19 MAX 817 MIN .04 AC-FT 4480

06910800 MARAIS DES CYGNES RIVER NEAR READING, KS

LOCATION.--Lat 38°34'00", long 95°57'50", in SE¼SW¼ sec.15, T.17 S., R.13 E., Lyon County, Hydrologic Unit 10290101, at downstream side of highway bridge, 1.9 mi (3.1 km) downstream from confluence of One Hundred and Fortytwo Mile Creek and Elm Creek, 4.3 mi (6.9 km) upstream from Duck Creek, 3.0 mi (4.8 km) north of Reading, and at mile 467.0 (751.4 km).

DRAINAGE AREA.--177 mi² (458 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,048.32 ft (319.528 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--8 years, 118 ft³/s (3.342 m³/s), 85,490 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft³/s (867 m³/s) June 27, 1969, gage height, 25.22 ft (7.687 m); no flow at times in 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 3,000 ft³/s (85.0 m³/s), and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 31	0400	3,640	103	16.82	5.127	July 8	0700	4,550	129	18.55	5.654
June 18	2300	20,100	569	24.51	7.471	Aug. 23	1000	3,370	95.4	16.07	4.898
June 19	1700	*24,300	688	24.79	7.556	Aug. 28	1800	3,050	86.4	15.01	4.575
June 22	0900	6,460	183	21.52	6.559	Sept. 1	1500	6,700	190	21.76	6.632
June 25	1300	11,600	329	23.65	7.208						

Minimum discharge, no flow Oct. 3, 4, 13-26, Nov. 16, 17, Jan. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.07	.01	.01	.17	.53	3.9	1.4	219	83	15	4300
2	.01	.06	.01	.00	.17	.50	3.9	1.1	114	77	12	771
3	.00	.05	.01	.00	.18	.66	3.3	.74	77	70	10	241
4	.00	.03	.01	.02	.20	.66	3.0	.47	57	72	13	394
5	.03	.02	.02	.03	.22	.61	2.6	.47	43	50	37	760
6	.04	.02	.03	.03	.20	.61	2.3	1.3	30	40	42	233
7	.03	.02	.03	.02	.19	.66	2.0	1.0	22	186	30	146
8	.01	.02	.03	.02	.23	.66	1.7	.76	17	2370	22	105
9	.01	.03	.03	.01	.35	.54	1.3	.54	14	255	16	82
10	.01	.02	.02	.01	.70	.45	.92	3.2	11	127	11	68
11	.01	.02	.02	.02	.90	1.1	.55	13	7.9	174	9.0	61
12	.01	.01	.02	.02	1.3	1.1	.14	6.4	6.8	341	9.0	56
13	.00	.01	.02	.02	1.8	1.1	.27	3.5	5.4	119	8.3	226
14	.00	.01	.02	.02	1.9	1.1	.46	2.0	4.9	74	18	230
15	.00	.01	.02	.02	2.3	.81	.43	1.1	4.7	57	95	96
16	.00	.00	.02	.01	2.3	.54	.33	.66	3.4	47	31	71
17	.00	.00	.02	.02	2.1	1.4	.32	3.9	152	39	21	65
18	.00	.01	.02	.02	2.0	7.3	.33	3.3	6360	37	17	58
19	.00	.01	.02	.03	1.7	2.2	.39	437	11500	30	12	49
20	.00	.01	.02	.04	1.2	.95	.47	992	2280	24	9.7	40
21	.00	.01	.02	.05	1.0	.59	.58	1630	1260	21	8.3	38
22	.00	.01	.02	.08	.96	.46	.49	497	4710	19	14	35
23	.00	.01	.02	.11	1.2	.39	.46	433	492	246	1790	34
24	.00	.01	.02	.12	1.0	.32	.46	140	1030	81	210	59
25	.00	.02	.02	.14	.86	.18	.41	68	5260	41	89	40
26	.00	.03	.02	.16	.80	.11	.42	45	690	146	56	33
27	.04	.03	.02	.17	.80	.11	.46	31	335	120	39	26
28	.04	.02	.02	.15	.71	1.6	.46	1010	209	42	1400	21
29	.05	.02	.02	.14	---	2.0	.37	241	176	29	569	22
30	.10	.01	.02	.15	---	.95	1.2	922	106	23	146	36
31	.09	---	.01	.16	---	1.4	---	1860	---	18	89	---
TOTAL	.69	.60	.61	1.80	27.44	31.59	33.92	83[illegible].84	35197.1	5048	4840.3	8394
MEAN	.016	.020	.020	.058	.98	1.02	1.13	269	1173	163	156	280
MAX	.10	.07	.03	.17	2.3	7.3	3.9	1860	11500	2370	1790	4300
MIN	.00	.00	.01	.00	.17	.11	.14	.47	3.4	18	8.3	21
AC-FT	1.0	1.2	1.2	3.6	54	63	67	16560	69810	10010	9600	16650

CAL YR 1976 TOTAL 10374.32 MEAN 28.3 MAX 2860 MIN .00 AC-FT 20580
WTR YR 1977 TOTAL 61926.69 MEAN 170 MAX 11500 MIN .00 AC-FT 122880

06910997 MELVERN LAKE NEAR MELVERN, KS

LOCATION.--Lat 38°30'34", long 95°42'36", in NW¼SW¼SW¼ sec.1, T.18 S., R.15 E., Osage County, Hydrologic Unit 10290101, in control tower of Melvern Dam on Marais des Cygnes River, 4.0 mi (6.4 km) west of Melvern, and at 447.7 mi (720.3 km).

DRAINAGE AREA.--349 mi² (904 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--November 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began in July 1972. Total capacity 652,500 acre-ft (804 hm³), consisting of the following: Dead storage 26 acre-ft (32,100 m³) below elevation 962.0 ft (293.2 m); conservation pool 154,400 acre-ft (190 hm³) between elevations 962.0 ft (293.2 m) and 1,036.0 ft (315.8 m); flood control pool 258,600 acre-ft (319 hm³) between elevations 1,036.0 ft (315.8 m) and 1,057.0 ft (322.2 m); and surcharge pool 507,600 acre-ft (626 hm³) between elevation 1,057.0 ft (322.2 m) and 1,073.0 ft (327.1 m). Reservoir is used to store water for flood control, irrigation and recreation.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,047.08 ft (319.150 m) June 27, 1977, contents, 246,400 acre-ft (304 hm³); minimum, 971.45 ft (296.10 m) Nov. 13, 1972, contents, 359 acre-ft (0.443 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,047.08 ft (319.150 m) June 27, contents, 246,400 acre-ft (304 hm³); minimum, 1,030.40 ft (314.066 m) May 16, contents, 118,900 acre-ft (147 hm³).

Capacity table (elevation, in feet, and total contents, in acre-ft)
(Computed by Corps of Engineers in 1963)

1,030	116,600	1,045	226,700
1,035	147,600	1,050	276,600
1,040	184,000		

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1032.39	1032.01	1031.54	1031.22	1031.08	1030.88	1030.76	1030.60	1035.82	1045.52	1036.90	1036.91
2	1032.38	1031.99	1031.52	1031.22	1031.07	1030.92	1030.71	1030.58	1035.84	1045.02	1036.57	1037.47
3	1032.35	1031.99	1031.51	1031.22	1031.06	1030.94	1030.69	1030.58	1035.86	1044.50	1036.22	1037.31
4	1032.40	1031.96	1031.49	1031.25	1031.05	1030.92	1030.78	1030.62	1035.88	1043.96	1035.96	1037.19
5	1032.42	1031.93	1031.50	1031.24	1031.04	1030.90	1030.68	1030.62	1035.88	1043.41	1035.65	1037.24
6	1032.40	1031.91	1031.50	1031.25	1031.04	1030.88	1030.65	1030.60	1035.87	1042.82	1035.32	1037.13
7	1032.36	1031.89	1031.50	1031.25	1031.02	1030.88	1030.64	1030.59	1035.85	1042.65	1034.98	1037.08
8	1032.37	1031.87	1031.47	1031.25	1031.02	1030.88	1030.63	1030.58	1035.83	1042.93	1034.63	1037.07
9	1032.34	1031.85	1031.47	1031.25	1031.02	1030.84	1030.62	1030.56	1035.80	1042.61	1034.29	1037.05
10	1032.33	1031.84	1031.44	1031.25	1031.02	1030.87	1030.60	1030.52	1035.79	1042.10	1034.11	1037.05
11	1032.31	1031.83	1031.44	1031.22	1031.02	1030.91	1030.56	1030.50	1035.78	1041.60	1034.19	1037.04
12	1032.29	1031.80	1031.41	1031.20	1031.02	1030.95	1030.54	1030.49	1035.76	1041.10	1034.15	1037.04
13	1032.28	1031.78	1031.42	1031.22	1031.03	1030.90	1030.61	1030.47	1035.75	1040.47	1034.11	1037.11
14	1032.27	1031.77	1031.40	1031.21	1031.01	1030.91	1030.60	1030.44	1035.73	1039.73	1034.20	1037.15
15	1032.23	1031.75	1031.40	1031.22	1031.00	1030.88	1030.60	1030.42	1035.71	1039.48	1034.18	1037.17
16	1032.20	1031.75	1031.39	1031.20	1030.98	1030.87	1030.62	1030.48	1035.69	1039.46	1034.18	1037.23
17	1032.15	1031.73	1031.38	1031.23	1030.98	1030.88	1030.61	1030.50	1035.83	1039.44	1034.13	1037.26
18	1032.16	1031.72	1031.36	1031.19	1030.99	1030.83	1030.62	1030.49	1038.28	1039.40	1034.07	1037.23
19	1032.14	1031.71	1031.40	1031.19	1030.97	1030.84	1030.60	1030.71	1041.08	1039.37	1034.06	1037.22
20	1032.11	1031.71	1031.36	1031.17	1030.95	1030.82	1030.64	1031.45	1042.79	1039.35	1034.05	1037.20
21	1032.08	1031.69	1031.38	1031.16	1030.96	1030.80	1030.63	1032.26	1043.87	1039.33	1034.03	1037.25
22	1032.04	1031.66	1031.34	1031.16	1030.97	1030.77	1030.62	1032.60	1045.33	1039.34	1034.14	1037.24
23	1032.07	1031.66	1031.34	1031.16	1031.03	1030.75	1030.61	1032.75	1045.58	1039.31	1035.04	1037.36
24	1032.03	1031.65	1031.32	1031.16	1030.97	1030.73	1030.58	1032.81	1045.83	1039.25	1035.02	1037.42
25	1032.01	1031.64	1031.32	1031.15	1030.96	1030.71	1030.56	1032.83	1046.70	1039.03	1034.67	1037.43
26	1032.00	1031.66	1031.30	1031.14	1030.96	1030.73	1030.55	1032.84	1047.04	1038.73	1034.74	1037.42
27	1032.00	1031.62	1031.30	1031.15	1030.94	1030.72	1030.52	1032.85	1047.02	1038.48	1034.79	1037.40
28	1031.99	1031.60	1031.30	1031.12	1030.92	1030.86	1030.50	1033.68	1046.77	1038.17	1035.14	1037.41
29	1032.00	1031.57	1031.26	1031.11	---	1030.79	1030.53	1034.15	1046.38	1037.86	1035.41	1037.42
30	1032.05	1031.55	1031.24	1031.10	---	1030.77	1030.60	1034.84	1045.99	1037.53	1035.21	1037.42
31	1032.03	---	1031.22	1031.09	---	1030.73	---	1035.73	---	1037.23	1035.08	---
MEAN	1032.20	1031.77	1031.39	1031.19	1031.00	1030.84	1030.62	1031.59	1039.71	1040.61	1034.82	1037.23
MAX	1032.42	1032.01	1031.54	1031.25	1031.08	1030.95	1030.78	1035.73	1047.04	1045.52	1036.90	1037.47
MIN	1031.99	1031.55	1031.22	1031.09	1030.92	1030.71	1030.50	1030.42	1035.69	1037.23	1034.03	1036.91
(†)	128,600	125,700	123,700	122,900	121,900	120,800	120,100	152,500	235,900	163,100	148,100	164,400
(‡)	-2,200	-2,900	-2,000	-800	-1,000	-1,100	-700	+32,400	+83,400	-72,800	-15,000	+16,300

CAL YR 1976 .... (‡) -11,400
WTR YR 1977 .... (‡) +33,600

† CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

06911500 SALT CREEK NEAR LYNDON, KS

LOCATION.--Lat 38°36'32", long 95°38'17", in SW¼SW¼SW¼ sec.34, T.16 S., R.16 E., Osage County, Hydrologic Unit 10290101, at downstream side of highway bridge, 2.5 mi (4.0 km) east of Lyndon, and at mile 12.6 (20.3 km).

DRAINAGE AREA.--111 mi² (287 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 1176: 1944-45(M). WSP 1340: 1943(M), 1946-47, 1948(P), 1949-50.

GAGE.--Water-stage recorder. Datum of gage is 955.78 ft (291.322 m) above mean sea level. Prior to Nov. 25, 1957, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--38 years, 61.2 ft³/s (1.733 m³/s), 44,340 acre-ft/yr (54.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,400 ft³/s (1,030 m³/s) July 11, 1951, gage height, 17.0 ft (5.18 m), from floodmark, from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1935 reached a stage a few feet higher than that of July 11, 1951, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 19	0400	* 7,700	218	13.45	4.100
June 21	2000	5,420	153	12.28	3.743
July 8	0200	3,160	89.5	9.95	3.033

Minimum dishcarge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.33	.00	.15	.07	.00	1.2	2.8	77	22	2.1	654
2	.00	.47	.00	.18	.08	.09	.67	2.0	34	21	1.9	183
3	.00	.33	.00	.18	.09	.20	.65	1.3	20	22	1.8	45
4	.00	.20	.00	.19	.10	.16	.54	.94	12	16	2.0	25
5	.00	.16	.00	.19	.13	.16	.38	.83	7.8	12	4.5	37
6	.00	.12	.00	.19	.15	.16	.38	.75	5.2	8.9	14	53
7	.00	.12	.00	.18	.17	.16	.37	.65	3.6	250	12	25
8	.00	.08	.00	.14	.20	.13	.29	2.2	2.4	1660	5.4	15
9	.00	.05	.00	.12	.47	.12	.17	1.6	1.9	127	3.1	10
10	.00	.04	.00	.10	.85	.12	.11	.86	1.9	54	2.3	7.6
11	.00	.02	.00	.09	.30	.34	.07	.68	1.6	262	2.1	5.7
12	.00	.00	.00	.08	.02	.49	.04	.65	1.5	189	2.1	5.0
13	.00	.00	.01	.07	.00	.56	.08	.65	1.5	54	1.9	4.8
14	.00	.00	.02	.06	.00	.38	.30	.65	1.5	30	1.7	4.9
15	.00	.00	.04	.05	.00	.19	.95	.61	1.1	20	1.7	4.6
16	.00	.00	.00	.05	.00	.12	1.1	.39	1.1	15	4.9	6.3
17	.00	.00	.00	.05	.00	.09	1.0	2.0	2.0	11	6.2	6.3
18	.00	.00	.00	.05	.00	23	.92	2.2	3650	8.5	3.7	6.6
19	.00	.00	.02	.06	.00	13	.92	24	5730	6.6	2.6	4.0
20	.00	.00	.12	.06	.00	4.6	1.0	968	1030	5.2	2.1	2.9
21	.00	.00	.07	.06	.00	2.0	1.4	490	1780	4.1	1.7	3.1
22	.00	.00	.07	.06	.00	1.2	1.5	210	2320	3.9	1.8	2.9
23	.00	.00	.07	.06	.00	.76	1.4	44	326	4.0	3.6	3.5
24	.00	.00	.08	.06	.00	.67	1.3	28	308	3.5	21	44
25	.00	.00	.11	.06	.00	.56	.70	15	166	3.0	12	27
26	.00	.00	.14	.07	.00	.49	.74	8.7	345	4.6	6.0	12
27	.00	.00	.16	.07	.00	.47	.73	6.0	243	19	3.7	6.1
28	.00	.00	.16	.08	.00	.75	.55	498	56	15	22	3.7
29	.00	.00	.14	.09	---	.99	.39	174	39	7.0	56	3.5
30	.00	.00	.13	.09	---	.59	.90	457	28	4.5	21	3.5
31	.05	---	.12	.08	---	1.2	---	684	---	2.8	10	---
TOTAL	.05	1.92	1.46	3.02	2.63	53.75	20.75	3628.46	16197.1	2865.6	236.9	1215.0
MEAN	.002	.064	.047	.097	.094	1.73	.69	117	540	92.4	7.64	40.5
MAX	.05	.47	.16	.19	.85	23	1.5	968	5730	1660	56	654
MIN	.00	.00	.00	.05	.00	.00	.04	.39	1.1	2.8	1.7	2.9
AC-FT	.10	3.8	2.9	6.0	5.2	107	41	7200	32130	5680	470	2410

CAL YR 1976 TOTAL 3179.1 MEAN 8.69 MAX 927 MIN .00 AC-FT 6310
WTR YR 1977 TOTAL 24226.64 MEAN 66.4 MAX 5730 MIN .00 AC-FT 48050

06911900 DRAGOON CREEK NEAR BURLINGAME, KS

LOCATION.--Lat 38°42'30", long 95°50'20", in SE¼SE¼ sec.27, T.15 S., R.14 E., Osage County, Hydrologic Unit 10290101, on left bank, 110 ft (34 m) downstream from city of Burlingame pumping station and dam, 0.2 mi (0.3 km) downstream from bridge on U.S. Highway 56, 2.0 mi (3.2 km) downstream from Plum Creek and 3.0 mi (4.8 km) south of Burlingame.

DRAINAGE AREA.--114 mi^2 (295 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,016.06 ft (309.695 m) above mean sea level. Prior to June 8, 1960, nonrecording gage at bridge 180 ft (55 m) upstream at present datum.

REMARKS.--Records good. Diversions 110 ft (34 m) above station for municipal supply of Burlingame.

AVERAGE DISCHARGE.--17 years, 67.2 ft^3/s (1.903 m^3/s), 48,690 acre-ft/yr (60.0 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft^3/s (702 m^3/s) June 19, 1977, gage height, 22.05 ft (6.721 m) from rating curve extended above 11,000 ft^3/s (312 m^3/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900, 23.4 ft (7.13 m) June 26, 1946, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,500 ft^3/s (42.5 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
May 20	1000	1,720	48.7	9.10	2.774	June 22	0700	3,840	109	15.88	4.840
May 21	1900	1,740	49.3	9.14	2.786	June 25	0900	10,000	283	20.79	6.337
May 31	0300	1,530	43.3	8.17	2.490	Sept. 1	1400	1,860	52.7	9.62	2.932
June 19	1000	*24,800	702	22.05	6.721						

Minimum discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	79	41	2.0	887
2	.00	.00	.00	.00	.00	.00	.00	.00	40	35	2.0	154
3	.00	.00	.00	.00	.00	.00	.00	.00	24	36	2.0	53
4	.00	.00	.00	.00	.00	.00	.00	.00	17	30	2.2	34
5	.00	.00	.00	.00	.00	.00	.00	.00	12	22	4.7	102
6	.00	.00	.00	.00	.00	.00	.00	.00	9.1	18	4.2	52
7	.00	.00	.00	.00	.00	.00	.00	.00	6.6	215	5.8	30
8	.00	.00	.00	.00	.00	.00	.00	.21	5.7	657	3.7	21
9	.00	.00	.00	.00	.00	.00	.00	.17	5.2	69	2.6	16
10	.00	.00	.00	.00	.00	.00	.00	.00	5.0	36	2.4	13
11	.00	.00	.00	.00	.00	.00	.00	.00	3.7	424	2.3	11
12	.00	.00	.00	.00	.00	.00	.00	.24	3.2	236	2.3	9.5
13	.00	.00	.00	.00	.00	.00	.00	2.8	2.9	56	2.1	466
14	.00	.00	.00	.00	.00	.00	.00	2.2	2.4	33	2.0	146
15	.00	.00	.00	.00	.00	.00	.00	1.3	2.0	21	2.1	47
16	.00	.00	.00	.00	.00	.00	.00	.98	2.0	17	2.7	31
17	.00	.00	.00	.00	.00	.00	.00	6.7	5.5	14	2.9	25
18	.00	.00	.00	.00	.00	.00	.00	2.5	2110	10	2.9	20
19	.00	.00	.00	.00	.00	.00	.00	175	12000	7.4	2.7	16
20	.00	.00	.00	.00	.00	.00	.00	987	1020	6.5	2.6	13
21	.00	.00	.00	.00	.00	.00	.00	822	1070	5.2	2.6	11
22	.00	.00	.00	.00	.00	.00	.00	229	2380	5.0	3.0	11
23	.00	.00	.00	.00	.06	.00	.00	200	386	5.0	6.7	11
24	.00	.00	.00	.00	.00	.00	.00	68	737	5.0	11	21
25	.00	.00	.00	.00	.00	.00	.00	30	5110	4.8	12	20
26	.00	.00	.00	.00	.00	.00	.00	16	291	4.2	7.8	13
27	.00	.00	.00	.00	.00	.00	.00	13	131	3.5	5.8	8.3
28	.00	.00	.00	.00	.00	.07	.00	12	88	3.2	80	8.0
29	.00	.00	.00	.00	---	.01	.00	11	70	3.0	118	8.0
30	.00	.00	.00	.00	---	.00	.00	257	53	2.6	27	12
31	.00	---	.00	.00	---	.00	---	663	---	2.1	16	---
TOTAL	.00	.00	.00	.00	.06	.08	.00	3500.10	25671.3	2027.5	346.1	2269.8
MEAN	.000	.000	.000	.000	.002	.003	.000	113	856	65.4	11.2	75.7
MAX	.00	.00	.00	.00	.06	.07	.00	987	12000	657	118	887
MIN	.00	.00	.00	.00	.00	.00	.00	.00	2.0	2.1	2.0	8.0
AC-FT	.00	.00	.00	.00	.1	.2	.00	6940	50920	4020	686	4500

CAL YR 1976 TOTAL 4415.25 MEAN 12.1 MAX 1050 MIN .00 AC-FT 8760
WTR YR 1977 TOTAL 33814.94 MEAN 92.6 MAX 12000 MIN .00 AC-FT 67070

06911900 DRAGOON CREEK NEAR BURLINGAME, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY					
24...	1125	61	300	253	42
JUN					
18...	1455	3060	200	4040	33400

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
JUN										
18...	1455	3060	4040	43	55	66	80	94	98	100

06912490 POMONA LAKE NEAR QUENEMO, KS

LOCATION.--Lat 38°38'51", long 95°33'50", in NE¼SE¼NE¼ sec.19, T.16 S., R.17 E., Osage County, Hydrologic Unit 10290101, in control tower at dam on Hundred and Ten Mile Creek, 5 mi (8.0 km) northwest of Quenemo, and 7.9 mi (12.7 km) above mouth.

DRAINAGE AREA.--322 mi² (834 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--April 1964 to current year. Prior to October 1971, published as "Pomona Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (Corps of Engineers bench mark).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Oct. 18, 1963. Total capacity, 502,600 acre-ft (620 hm³), consisting of the following: Sedimentation, 28,000 acre-ft (34.5 hm³) below elevation 960.5 ft (292.8 m); conservation pool, 42,600 acre-ft (52.5 hm³) between elevations 960.5 ft (292.8 m) and 974.0 ft (296.9 m); flood control pool, 176,800 acre-ft (218 hm³) between elevations 974.0 ft (296.9 m) and 1,003.0 ft (305.7 m); and surcharge pool, 255,200 acre-ft (315 hm³) between elevations 1,003.0 ft (305.7 m) and 1,025.4 ft (312.5 m). Reservoir is used for flood control, conservation, and recreation. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 989.01 ft (301.450 m) Apr. 5, 1973, contents, 146,100 acre-ft (180 hm³); minimum since conservation pool was first filled, 969.60 ft (295.534 m) Mar. 29, 30, 1967, contents, 54,260 acre-ft (66.9 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 988.36 ft (301.252 m) June 27, contents, 142,100 acre-ft (175 hm³); minimum, 969.79 ft (295.592 m) May 16, contents, 54,920 acre-ft (67.7 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by U.S. Army, Corps of Engineers, revised in 1964)

965	39,930	980	97,040
970	55,640	985	122,800
975	74,670	990	152,200

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	972.17	971.69	971.19	970.68	970.35	970.12	970.17	969.97	973.09	985.96	974.28	975.45
2	972.15	971.69	971.17	970.68	970.33	970.09	970.17	969.97	973.12	985.18	974.09	975.59
3	972.13	971.69	971.15	970.67	970.33	970.12	970.16	969.97	973.12	984.33	974.04	975.40
4	972.11	971.68	971.14	970.67	970.31	970.13	970.19	969.97	973.09	983.45	974.01	975.24
5	972.10	971.66	971.12	970.67	970.29	970.12	970.18	969.98	973.10	982.57	974.04	975.06
6	972.10	971.65	971.12	970.67	970.28	970.10	970.16	969.98	973.09	981.66	974.03	974.94
7	972.08	971.63	971.11	970.66	970.27	970.09	970.15	969.96	973.06	981.95	974.00	974.90
8	972.06	971.61	971.09	970.66	970.26	970.08	970.14	969.96	973.03	982.57	973.99	974.84
9	972.04	971.60	971.07	970.64	970.25	970.06	970.13	969.97	972.97	982.02	973.97	974.81
10	972.02	971.58	971.06	970.62	970.26	970.03	970.11	969.94	972.92	981.15	973.95	974.80
11	972.01	971.56	971.02	970.61	970.26	970.08	970.09	969.92	972.89	980.73	973.97	974.78
12	971.99	971.53	971.01	970.59	970.26	970.11	970.07	969.90	972.88	980.03	973.95	974.78
13	971.98	971.51	970.98	970.58	970.27	970.12	970.07	969.88	972.85	979.04	973.92	975.13
14	971.96	971.49	970.98	970.57	970.26	970.11	970.08	969.85	972.84	978.04	973.92	975.25
15	971.93	971.48	970.97	970.56	970.25	970.10	970.08	969.82	972.81	977.69	973.90	975.27
16	971.89	971.46	970.95	970.54	970.24	970.09	970.08	969.81	972.76	977.88	973.92	975.30
17	971.86	971.44	970.94	970.53	970.23	970.26	970.09	969.86	972.78	977.67	973.89	975.30
18	971.83	971.42	970.93	970.51	970.22	970.30	970.09	969.85	976.33	977.63	973.88	975.30
19	971.81	971.40	970.92	970.49	970.21	970.31	970.09	969.87	979.39	977.60	973.87	975.28
20	971.79	971.39	970.91	970.49	970.20	970.28	970.09	970.08	980.87	977.57	973.85	975.26
21	971.77	971.38	970.88	970.48	970.19	970.28	970.10	970.32	983.13	977.54	973.83	975.29
22	971.76	971.35	970.86	970.46	970.17	970.26	970.09	970.65	984.99	977.51	973.86	975.27
23	971.74	971.33	970.84	970.46	970.21	970.24	970.08	970.86	985.41	977.40	973.98	975.33
24	971.73	971.31	970.82	970.46	970.22	970.23	970.06	971.05	985.76	977.30	973.95	975.34
25	971.72	971.29	970.81	970.45	970.19	970.22	970.03	971.17	987.96	977.03	973.93	975.34
26	971.71	971.28	970.80	970.43	970.18	970.20	970.01	971.14	988.30	976.63	973.91	975.33
27	971.70	971.27	970.78	970.42	970.16	970.20	969.98	971.79	988.27	976.24	973.99	975.31
28	971.70	971.25	970.76	970.41	970.15	970.26	969.96	972.14	987.90	975.81	974.12	975.33
29	971.69	971.23	970.75	970.39	---	970.25	969.93	972.08	987.27	975.41	974.19	975.32
30	971.69	971.21	970.73	970.38	---	970.25	969.95	972.43	986.68	974.91	974.19	975.31
31	971.69	---	970.69	970.37	---	970.20	---	973.09	---	974.60	974.29	---
MEAN	971.90	971.47	970.95	970.54	970.24	970.17	970.09	970.49	978.02	979.19	973.99	975.20
MAX	972.17	971.69	971.19	970.68	970.35	970.31	970.19	973.09	988.30	985.96	974.29	975.59
MIN	971.69	971.21	970.69	970.37	970.15	970.03	969.93	969.81	972.76	974.60	973.83	974.78
(+)	61,720	59,960	58,080	56,940	56,170	56,340	55,470	67,020	132,300	73,020	71,770	75,950
(*)	-1,860	-1,760	-1,880	-1,140	-770	+170	-870	+11,550	+65,280	-59,280	-1,250	+4,180

CAL YR 1976 .... (*) -4,980
WTR YR 1977 .... (*) +12,370

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
* CHANGE IN CONTENTS, IN ACRE-FEET.

06912500 HUNDRED AND TEN MILE CREEK NEAR QUENEMO, KS

LOCATION.--Lat 38°38'41", long 95°33'34", in NE¼NW¼SW¼ sec.20, T.16 S., R.17 E., Osage County, Hydrologic Unit 10290101, on left bank 800 ft (244 m) downstream from outlet works of Pomona Dam, 4.5 mi (7.2 km) northwest of Quenemo, and 7.7 mi (12.4 km) upstream from mouth.

DRAINAGE AREA.--322 mi^2 (834 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1939 to current year. Prior to October 1941, published as "Dragoon Creek".

REVISED RECORDS.--WSP 1116: 1942.

GAGE.--Water-stage recorder. Datum of gage is 919.05 ft (280.126 m) above mean sea level (Corps of Engineers bench mark). See WSP 1919 for history of changes prior to Apr. 11, 1963.

REMARKS.--Records good. Flow completely regulated since 1964 by Pomona Lake (see sta 06912490).

AVERAGE DISCHARGE.--38 years, 173 ft^3/s (4.899 m^3/s), 125,300 acre-ft/yr (154 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,600 ft^3/s (1,090 m^3/s) July 11, 1951, gage height, 28.47 ft (8.678 m), site and datum then in use, from rating curve extended above 20,000 ft^3/s (566 m^3/s) on basis of slope-area measurement of peak flow; no flow at times in 1952-57, 1960, 1968, 1970, 1971, 1973, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1919, 28.47 ft (8.678 m) July 11, 1951, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,490 ft^3/s (70.5 m^3/s) July 2, gage height, 13.76 ft (4.194 m); no flow Apr. 2-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	25	20	21	15	3.5	18	12	2200	840	25
2	17	17	24	20	21	15	.00	12	12	2480	358	193
3	18	17	24	20	21	14	.00	12	16	2460	86	439
4	18	17	24	20	21	14	.00	12	23	2440	74	435
5	17	17	24	21	21	14	.00	12	17	2410	38	436
6	17	17	23	21	21	14	.00	11	12	2380	13	269
7	17	18	23	21	21	13	.00	11	12	2050	13	96
8	17	18	23	20	21	11	.00	11	12	451	13	96
9	17	18	22	20	20	11	.00	12	10	1540	14	64
10	17	18	22	20	16	11	4.3	12	12	2180	14	17
11	17	18	21	20	15	12	12	12	12	2380	14	17
12	16	17	21	20	15	12	13	12	12	2380	14	17
13	17	17	20	20	15	11	13	12	12	2370	14	18
14	17	17	20	20	14	11	13	12	12	2380	15	18
15	18	17	20	20	14	11	13	15	12	1040	15	18
16	17	17	18	21	14	10	13	13	12	31	15	17
17	17	18	18	20	15	11	13	14	12	31	15	17
18	17	18	19	20	15	10	14	13	16	31	15	17
19	17	18	19	20	15	10	15	17	15	31	15	17
20	17	18	19	20	15	10	15	16	15	31	15	17
21	17	18	19	20	15	9.9	17	18	16	47	15	17
22	17	18	19	20	15	8.2	17	12	16	104	17	17
23	17	18	19	21	15	8.2	19	12	18	179	16	18
24	17	20	20	20	15	8.2	19	12	17	180	14	21
25	17	25	20	20	15	9.9	18	12	15	551	14	19
26	17	25	20	21	15	10	20	12	14	862	14	17
27	17	25	20	21	16	11	20	12	431	859	15	17
28	16	25	19	20	15	10	20	17	1460	852	21	17
29	16	25	19	20	---	11	20	14	2030	850	16	18
30	16	25	20	21	---	9.3	21	20	2020	847	15	18
31	16	---	20	21	---	6.8	---	14	---	843	16	---
TOTAL	525	572	644	629	472	342.5	332.80	414	6305	37470	1783	2422
MEAN	16.9	19.1	20.8	20.3	16.9	11.0	11.1	13.4	210	1209	57.5	80.7
MAX	18	25	25	21	21	15	21	20	2030	2480	840	439
MIN	16	16	18	20	14	6.8	.00	11	10	31	13	17
AC-FT	1040	1130	1280	1250	936	679	660	821	12510	74320	3540	4800

CAL YR 1976 TOTAL 8032.00 MEAN 21.9 MAX 364 MIN 13 AC-FT 15930
WTR YR 1977 TOTAL 51911.30 MEAN 142 MAX 2480 MIN .00 AC-FT 103000

06913000 MARAIS DES CYGNES RIVER NEAR POMONA, KS

LOCATION.--Lat 38°35'03", long 95°27'12", in SE¼NE¼SE¼ sec.7, T.17 S., R.18 E., Franklin County, Hydrologic Unit 10290101, on right bank at downstream side of county highway bridge, 1.5 mi (2.4 km) south of Pomona, 4.7 mi (7.6 km) upstream from Miller Dam, 5.7 mi (9.2 km) downstream from 110 Mile Creek, and at mile 418.1 (672.7 km).

DRAINAGE AREA.--1,040 mi² (2,694 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1922 to February 1938, October 1968 to current year. Prior to October 1968, published as "near Quenemo".

REVISED RECORDS.--WSP 1310: 1924(M), 1929, 1931(M), 1934, 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 893.74 ft (272.412 m) above mean sea level. July 1922 to February 1938, nonrecording gage 1.7 mi (2.7 km) upstream at datum 891.36 ft (271.687 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good. Flow regulated since 1973 by Melvern Lake (see sta 06910997) and since 1964 by Pomona Lake (see sta 06912490).

AVERAGE DISCHARGE.--24 years (water years 1923-37, 1969-77), 472 ft³/s (13.37 m³/s), 342,000 acre-ft/yr (422 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,400 ft³/s (1,970 m³/s) Nov. 17, 1928, gage height, 38.38 ft (11.698 m), from floodmark, site and datum then in use, from rating curve extended above 20,000 ft³/s (566 m³/s) by logarithmic plotting and unit-runoff study at gage height 40.35 ft (12.299 m) for flood of July 11, 1951; no flow at times in 1926, 1931, 1933, 1934, 1936-38.

EXTREMES FOR CURRENT YEAR.--Peak discharge above regulated base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 20	0100	*12,100	343	25.92	7.900	July 12	1200	5,720	162	16.45	5.014
June 22	1900	10,400	295	25.40	7.742	July 15	1000	5,780	164	16.55	5.044
July 3	1400	5,380	152	15.88	4.840	Sept. 1	2300	4,.30	117	13.57	4.136

Minimum discharge, 22 ft³/s (0.623 m³/s) April 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	39	46	37	37	41	45	44	806	4210	1960	3360
2	38	36	47	37	37	44	41	33	272	4970	1800	2460
3	33	36	48	38	38	46	34	28	159	5340	1310	1700
4	34	31	48	40	41	45	31	29	112	5300	1280	1720
5	41	29	49	42	42	43	28	30	89	5230	1310	1650
6	39	36	50	42	[illegible]	39	29	28	70	5170	1220	1630
7	37	38	40	41	39	31	29	28	57	5110	1210	881
8	33	37	49	40	39	31	30	28	53	3690	1210	478
9	34	35	48	36	42	28	26	38	50	3020	1200	304
10	36	36	47	32	44	29	23	33	45	3960	1180	167
11	37	36	34	32	45	38	22	29	45	5020	390	73
12	35	36	48	32	43	35	31	26	44	5620	127	72
13	36	36	40	37	37	34	37	25	42	5350	153	364
14	36	35	42	42	36	30	39	25	42	5480	133	1120
15	36	35	40	44	32	30	35	25	40	5180	130	275
16	36	37	39	41	32	31	31	25	40	961	132	640
17	36	37	41	38	36	30	25	27	38	126	139	1000
18	35	39	40	38	36	47	25	28	1820	104	137	262
19	33	39	40	37	35	40	25	32	9930	97	134	277
20	35	38	36	41	33	59	27	1340	10900	92	98	108
21	37	37	33	41	34	50	25	1530	5610	90	51	104
22	37	36	42	41	35	44	25	1250	8930	112	57	207
23	39	38	39	42	41	39	25	323	7260	332	185	117
24	39	39	39	43	40	37	24	158	2810	498	244	603
25	38	42	38	44	38	37	24	106	952	625	491	414
26	35	49	38	44	38	39	24	75	614	1800	773	200
27	36	49	39	44	38	42	25	59	1210	1960	426	193
28	38	46	38	45	39	44	26	126	2080	1960	811	157
29	37	43	35	38	---	44	24	886	3840	1970	945	110
30	40	45	32	37	---	42	31	1060	4200	1960	674	113
31	40	---	34	37	---	42	---	2140	---	1960	1110	---
TOTAL	1137	1145	1279	1223	1068	1211	866	9614	62160	87297	21020	20759
MEAN	36.7	38.2	41.3	39.5	38.1	39.1	28.9	310	2072	2816	678	692
MAX	41	49	50	45	45	59	45	2140	10900	5620	1960	3360
MIN	33	29	32	32	32	28	22	25	38	90	51	72
AC-FT	2260	2270	2540	2430	2120	2400	1720	19070	123300	173200	41690	41180

CAL YR 1976 TOTAL 41604 MEAN 114 MAX 4780 MIN 26 AC-FT 82520
WTR YR 1977 TOTAL 208779 MEAN 572 MAX 10900 MIN 22 AC-FT 414100

06913500 MARAIS DES CYGNES RIVER NEAR OTTAWA, KS

LOCATION.--Lat 38°37'00", long 95°15'25", in SW¼SW¼NE¼ sec.36, T.16 S., R.19 E., Franklin County, Hydrologic Unit 10290101, on right bank at sewage disposal plant in Ottawa, 0.9 mi (1.4 km) downstream from Main Street Bridge, 1.9 mi (3.1 km) downstream from Eightmile Creek, and at mile 398.9 (641.8 km).

DRAINAGE AREA.--1,250 mi² (3,240 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1902 to October 1905, October 1918 to current year. Published as Osage River at Ottawa 1902-5, and as Osage River near Ottawa 1918-47.

REVISED RECORDS.--WSP 1006: 1923, 1927, 1929. WSP 1440: 1904-5, 1922, 1929(M), 1935, 1941-43, 1944-45(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 857.68 ft (261.421 m) above mean sea level. Aug. 26, 1902, to Oct. 31, 1905, nonrecording gages at Main Street Bridge in Ottawa at different datums. Oct. 27, 1918, to Sept. 4, 1962, water-stage recorder at Seventh Street Bridge, 0.9 mi (1.4 km) downstream at datum 0.47 ft (0.143 m) higher.

REMARKS.--Records good except those for January, which are poor. Flow regulated since 1973 by Melvern Lake (see sta 06910997) and since 1964 by Pomona Lake (see sta 06912490).

AVERAGE DISCHARGE.--61 years (1902-5, 1919-77), 638 ft³/s (18.07 m³/s), 462,200 acre-ft/yr (570 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 142,000 ft³/s (4,020 m³/s) July 11, 1951, gage height, 42.50 ft (12.954 m), site and datum then in use, from rating curve extended above 44,000 ft³/s (1,250 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1920, 1930-34, 1936, 1937, 1939-41.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of 1951 is the highest known since Ottawa was settled (about 1864) according to information reported in "Climate of Kansas - 1948". Flood of June 13 or 14, 1844, reached a stage of about 1.5 ft (0.5 m) lower than that in 1951 according to same information.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft³/s (413 m³/s) June 22, gage height, 31.27 ft (9.531 m); no other peak above base of 7,000 ft³/s (198 m³/s); minimum, 16 ft³/s (0.45 m³/s) Apr. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	38	36	33	39	35	32	137	1440	4040	1390	4150
2	33	35	37	32	41	39	31	92	395	4440	1190	3890
3	34	35	37	33	43	43	27	62	213	4940	1520	1540
4	32	32	37	35	44	38	23	72	139	4980	1270	1670
5	48	28	37	35	44	37	19	99	105	4920	1130	1560
6	39	28	36	34	43	35	19	70	80	4850	1110	1570
7	36	31	35	34	42	37	19	53	61	4830	729	1060
8	33	33	36	33	43	36	19	46	54	4350	1120	588
9	32	33	39	33	44	34	20	43	48	3000	1100	327
10	32	33	39	31	46	33	21	52	45	3320	1100	244
11	33	32	38	31	48	62	19	43	40	4450	674	108
12	33	32	35	33	48	55	20	38	46	5160	136	99
13	31	31	39	35	45	46	43	36	41	5080	157	975
14	32	33	37	34	41	40	44	34	38	4940	145	1610
15	31	34	38	32	39	35	40	33	38	5110	138	537
16	31	34	37	31	37	35	37	34	35	2070	135	487
17	32	34	37	30	38	34	43	42	36	204	135	1210
18	34	33	38	33	39	238	39	38	1460	137	136	395
19	35	33	37	37	37	89	44	41	6930	124	138	321
20	34	33	39	38	37	51	65	752	9950	114	124	169
21	34	33	33	38	39	49	351	1760	9860	109	64	146
22	34	33	37	37	42	40	127	1530	14200	123	48	219
23	44	33	39	38	55	36	79	568	11000	260	279	176
24	38	34	38	40	42	31	56	214	6500	489	149	490
25	36	35	37	40	39	30	47	149	2100	1210	447	616
26	35	37	36	42	37	30	41	101	1020	1840	646	284
27	39	39	37	44	37	35	39	77	1200	1860	607	193
28	37	37	37	40	36	41	38	99	1500	1860	451	224
29	36	36	39	38	---	37	36	732	2500	1840	1150	144
30	46	36	37	36	---	34	68	1170	4000	1830	602	139
31	41	---	35	36	---	31	---	1970	---	1830	911	---
TOTAL	1097	1008	1149	1096	1165	1446	1506	10187	75074	84310	18931	25141
MEAN	35.4	33.6	37.1	35.4	41.6	46.6	50.2	329	2502	2720	611	838
MAX	48	39	39	44	55	238	351	1970	14200	5160	1520	4150
MIN	31	28	33	30	36	30	19	33	35	109	48	99
AC-FT	2180	2000	2280	2170	2310	2870	2990	20210	148900	167200	37550	49870

CAL YR 1976 TOTAL 44047 MEAN 120 MAX 5160 MIN 25 AC-FT 87370
WTR YR 1977 TOTAL 222110 MEAN 609 MAX 14200 MIN 19 AC-FT 440600

06914000 POTTAWATOMIE CREEK NEAR GARNETT, KS

LOCATION.--Lat 38°20'01", long 95°14'55", in SW¼SW¼SW¼ sec.6, T.20 S., R.20 E., Anderson County, Hydrologic Unit 10290101, at upstream side of bridge on U.S. Highway 59, 0.6 mi (1.0 km) downstream from confluence of North Pottawatomie and Cedar Creeks, 0.2 mi (0.3 km) upstream from Atchison, Topeka and Santa Fe Railway Co. bridge, 4.0 mi (6.4 km) north of Garnett, and at mile 40.7 (65.5 km).

DRAINAGE AREA.--334 mi² (865 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1390: 1940, 1941(M), 1945, 1947(M), 1949-50.

GAGE.--Water-stage recorder. Datum of gage is 873.23 ft (266.160 m) above mean sea level. See WSP 1919 for history of changes prior to May 16, 1958.

REMARKS.--Records good.

AVERAGE DISCHARGE.--38 years, 225 ft³/s (6.372 m³/s), 163,000 acre-ft/yr (201 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,000 ft³/s (1,610 m³/s) Sept. 13, 1961, gage height, 35.38 ft (10.784 m); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1858, 35.38 ft (10.784 m) Sept. 13, 1961, from information by local newspaper.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 19	2000	*13,000	368	29.44	8.973
June 22	0500	7,250	205	27.47	8..73

Minimum discharge, no flow Oct. 1-4, 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.15	.15	.08	.08	.06	.46	.10	370	86	1.6	503
2	.00	.15	.15	.08	.06	.08	.46	.10	153	71	1.5	235
3	.00	.15	.15	.08	.08	.15	.46	.10	92	69	1.4	96
4	.00	.08	.15	.15	.10	.15	.46	.20	60	52	1.4	49
5	.04	.08	.10	.15	.10	.15	.52	.40	43	42	1.4	28
6	.06	.08	.08	.15	.15	.15	.58	.70	29	35	1.7	18
7	.08	.08	.10	.15	.08	.10	.58	.76	18	26	1.8	11
8	.08	.08	.08	.15	.08	.10	.58	.76	11	466	1.6	7.8
9	.06	.08	.08	.15	.10	.10	.52	.70	6.8	702	1.4	6.4
10	.06	.08	.10	.15	.20	.10	.40	9.4	5.2	154	1.2	4.7
11	.04	.08	.10	.08	.25	.52	.40	21	4.0	153	1.6	3.9
12	.06	.08	.08	.10	.30	.52	.30	6.2	3.1	153	1.9	3.6
13	.04	.10	.08	.10	.30	.52	.30	2.9	2.4	83	1.9	89
14	.04	.15	.08	.10	.20	.46	.30	1.5	1.8	47	1.8	1200
15	.02	.20	.06	.08	.20	.40	.30	1.1	1.4	27	1.6	267
16	.00	.20	.08	.08	.20	.25	.30	1.0	1.1	18	1.5	198
17	.00	.15	.08	.06	.10	.25	.30	1.1	.82	12	1.5	402
18	.02	.10	.08	.06	.10	.20	.30	35	2470	7.9	1.3	200
19	.04	.10	.06	.04	.10	.20	.30	48	9790	6.0	1.2	120
20	.04	.10	.04	.08	.10	.20	.30	25	8260	4.8	1.2	80
21	.04	.10	.04	.08	.10	.20	.30	38	5620	4.1	1.1	60
22	.04	.10	.04	.06	.08	.20	.46	591	6420	3.7	1.1	50
23	.04	.10	.06	.06	.06	.20	.46	174	4000	3.4	1.1	45
24	.08	.10	.08	.08	.06	.20	.40	87	4060	3.2	1.1	624
25	.08	.15	.15	.08	.06	.30	.30	53	1810	2.9	1.1	200
26	.08	.10	.20	.08	.06	.40	.25	38	1120	2.5	1.1	120
27	.08	.10	.15	.10	.06	.64	.15	25	562	2.3	1.0	70
28	.08	.10	.20	.20	.06	.88	.10	19	232	2.1	4.0	56
29	.08	.10	.15	.10	---	.94	.10	980	143	2.1	6.1	44
30	.20	.10	.20	.10	---	.82	.10	2150	108	2.0	3.4	36
31	.15	---	.10	.08	---	.52	---	808	---	1.8	2.2	---
TOTAL	1.63	3.32	3.25	3.09	3.42	9.96	10.74	5119.02	45397.62	2244.8	53.8	4827.4
MEAN	.053	.11	.10	.10	.12	.32	.36	165	1513	72.4	1.74	161
MAX	.20	.20	.20	.20	.30	.94	.58	2150	9790	702	6.1	1200
MIN	.00	.08	.04	.04	.06	.06	.10	.10	.82	1.8	1.0	3.6
AC-FT	3.2	6.6	6.4	6.1	6.8	20	21	10150	90050	4450	107	9580

CAL YR 1976 TOTAL 17192.91 MEAN 47.0 MAX 2460 MIN .00 AC-FT 34100
WTR YR 1977 TOTAL 57678.05 MEAN 158 MAX 9790 MIN .00 AC-FT 114400

06914000 POTTAWATOMIE CREEK NEAR GARNETT, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-70, 1976 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
JUN					
19...	1400	10900	100	1190	35000
SEP					
01...	1450	740	100	52	105

06915000 BIG BULL CREEK NEAR HILLSDALE, KS

LOCATION.--Lat 38°38'12", long 94°53'29", in SW¼SW¼SE¼ sec.20, T.16 S., R.23 E., Miami County, Hydrologic Unit 10290102, on right bank 1.0 mi (1.6 km) upstream from Tenmile Creek, 3.0 mi (4.8 km) southwest of Hillsdale, and 16.2 mi (26.1 km) upstream from mouth.

DRAINAGE AREA.--147 mi^2 (381 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1958 to current year. Records for 1949 to 1953 published in WSP 1146, 1176, 1210, 1240, and 1280 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1919: 1958. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 854.49 ft (260.449 m) above mean sea level. Auxiliary water-stage recorder 1,850 ft (564 m) downstream from base gage. Datum of auxiliary gage is 848.49 ft (258.620 m) above mean sea level. Prior to July 29, 1958, water-stage recorder and nonrecording gage operated at auxiliary gage site. All records from this site were later discredited.

REMARKS.--Records good. Some diversions above station for irrigation.

AVERAGE DISCHARGE.--19 years, 97.6 ft^3/s (2.764 m^3/s), 70,710 acre-ft/yr (87.2 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,600 ft^3/s (1,120 m^3/s) Sept. 13, 1961, gage height, 20.85 ft (6.355 m); no flow at times in 1959-64, 1966-67, 1969, 1971, 1974-77.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1910, 21.2 ft (6.462 m) July 11, 1951, present site and datum, discharge, 45,200 ft^3/s (1,280 m^3/s), on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,500 ft^3/s (70.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
June 21	2200	*15,400	436	18.73	5.709
June 23	1000	2,940	83.3	13.74	4.188

Minimum discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.40	4.2	2.8	81	39	.82	2.9
2	.00	.00	.00	.00	.00	.37	2.5	97	485	31	.82	9.3
3	.00	.00	.00	.00	.00	.76	1.7	118	120	24	.77	12
4	.00	.00	.00	.00	.00	.60	1.3	119	38	22	.69	5.0
5	.00	.00	.00	.00	.00	.50	.94	118	24	16	1.6	3.1
6	.00	.00	.00	.00	.00	.41	.67	41	16	12	27	2.0
7	.00	.00	.00	.00	.00	.38	.50	24	8.5	25	14	1.3
8	.00	.00	.00	.00	.00	.38	.48	19	6.8	216	5.7	.87
9	.00	.00	.00	.00	.00	.41	.28	36	7.1	53	3.2	.73
10	.00	.00	.00	.00	.00	.78	.20	26	4.7	26	1.7	.53
11	.00	.00	.00	.00	.00	1.4	.14	13	3.0	25	1.1	.32
12	.00	.00	.00	.00	.00	4.5	.02	8.6	817	99	.68	.38
13	.00	.00	.00	.00	.00	14	.14	6.4	215	27	.59	186
14	.00	.00	.00	.00	.00	11	.25	3.2	34	15	.33	272
15	.00	.00	.00	.00	.23	5.9	.31	3.2	20	11	.28	52
16	.00	.00	.00	.00	1.9	3.3	.39	3.7	13	8.2	.44	19
17	.00	.00	.00	.00	1.7	2.2	1.6	1.0	9.3	6.3	.69	12
18	.00	.00	.00	.00	1.2	23	1.8	.46	648	4.9	.81	9.0
19	.00	.00	.00	.00	.75	35	1.7	4.4	1370	2.5	.88	5.9
20	.00	.00	.00	.00	.54	12	2.4	2.7	338	3.1	.71	3.5
21	.00	.00	.00	.00	.53	6.2	23	41	8130	2.9	.48	2.6
22	.00	.00	.00	.00	.28	3.7	27	292	5820	2.6	1.0	2.3
23	.00	.00	.00	.00	.50	2.4	13	92	1860	2.3	4.2	1.9
24	.00	.00	.00	.00	.69	1.8	7.9	60	966	.82	1.1	3.4
25	.00	.00	.00	.00	.82	1.3	5.4	36	272	.39	.41	27
26	.00	.00	.00	.00	.82	.89	3.5	20	167	.37	.31	13
27	.00	.00	.00	.00	.66	.82	2.4	12	91	1.0	.20	5.8
28	.00	.00	.00	.00	.63	1.4	1.5	94	56	1.5	.91	2.6
29	.00	.00	.00	.00	---	1.8	1.1	106	103	1.8	1.5	1.5
30	.00	.00	.00	.00	---	4.6	1.6	125	53	1.5	1.3	1.3
31	.00	---	.00	.00	---	6.9	---	228	---	1.1	1.2	---
TOTAL	.00	.00	.00	.00	11.25	149.10	107.92	1753.46	21776.4	687.28	75.62	659.23
MEAN	.000	.000	.000	.000	.40	4.81	3.60	56.6	726	22.2	2.44	22.0
MAX	.00	.00	.00	.00	1.9	35	27	292	8130	216	27	272
MIN	.00	.00	.00	.00	.00	.37	.02	.46	3.0	.37	.20	.32
AC-FT	.00	.00	.00	.00	22	296	214	3480	43190	1360	150	1310

CAL YR 1976 TOTAL 4933.08 MEAN 13.5 MAX 2420 MIN .00 AC-FT 9780
WTR YR 1977 TOTAL 25220.26 MEAN 69.1 MAX 8130 MIN .00 AC-FT 50020

06916600 MARAIS DES CYGNES RIVER NEAR KANSAS-MISSOURI STATE LINE, KS

LOCATION.--Lat 38°13'21", long 94°40'04", in NE¼SE¼NW¼ sec.16, T.21 S., R.25 E., Linn County, Hydrologic Unit 10290102, on right bank, 1.7 mi (2.7 km) downstream from Big Sugar Creek, 6.8 mi (10.9 km) upstream from Kansas-Missouri State line, and at mile 313.5 (504.5 km).

DRAINAGE AREA.--3,230 mi^2 (8,370 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 757.06 ft (230.752 m) above mean sea level. Prior to Jan. 15, 1959, nonrecording gage 6.8 mi (10.9 km) downstream at datum 15.62 ft (4.761 m) lower.

REMARKS.--Records good. Natural flow of stream slightly affected by Pomona Lake since 1964 (see sta 06912490), Melvern Lake since 1973 (see sta 06910997), retention of overbank flow in wildlife refuge ponds, capacity, 5,500 acre-ft (6.78 hm), and by numerous small diversions for irrigation above station.

AVERAGE DISCHARGE.--19 years, 1,983 ft^3/s (56.16 m^3/s), 1,437,000 acre-ft/yr (1.77 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,400 ft^3/s (1,630 m^3/s) Sept. 16, 1961, gage height, 33.93 ft (10.342 m); no flow at times in 1963-64.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1951, reached a stage of 41.2 ft (12.56 m), from floodmark, discharge, 148,000 ft^3/s (4,190 m^3/s), from rating curve extended above 110,000 ft^3/s (3,120 m^3/s) on basis of velocity-area study. Flood of Nov. 18, 1928, reached a stage about 3.7 ft (1.13 m) lower, discharge, 106,000 ft^3/s (3,000 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49,300 ft^3/s (1,400 m^3/s) June 25, gage height, 32.83 ft (10.007 m); no other peak above base of 10,000 ft^3/s (283 m^3/s); minimum discharge, 1.4 ft^3/s (0.040 m^3/s) Jan. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	57	9.0	1.8	46	2.3	11	147	4250	6390	1770	739
2	30	56	9.0	3.5	43	1.9	7.9	238	5280	5200	1760	2420
3	28	53	9.0	4.0	43	2.0	7.2	278	4320	5020	1750	5090
4	29	45	9.5	3.2	46	1.8	7.0	441	1580	5220	1480	2880
5	44	42	11	3.2	49	1.9	5.5	1550	772	5270	1190	1800
6	41	43	9.0	3.8	52	2.0	5.0	1230	468	5160	1600	1640
7	37	42	8.5	4.4	54	7.7	6.2	599	334	5050	1800	1570
8	42	40	8.5	5.4	56	8.9	5.0	364	251	5300	1210	1380
9	43	38	9.0	7.2	59	7.7	3.3	305	187	6230	1130	837
10	34	37	9.0	4.9	63	6.3	2.4	273	148	5620	1100	502
11	31	38	8.5	22	74	9.5	6.0	229	126	4260	1130	347
12	27	32	8.5	34	85	18	14	173	460	4780	1080	262
13	30	9.0	8.0	34	100	67	7.4	141	4910	5720	521	215
14	27	8.0	8.0	38	115	95	6.3	116	1550	5730	214	955
15	24	7.5	8.0	39	88	80	4.7	101	339	5280	184	3500
16	24	7.5	7.5	39	37	76	3.3	88	212	5140	174	2140
17	24	8.0	7.5	37	33	56	3.6	81	156	4120	164	861
18	29	20	7.5	38	22	27	17	74	187	1090	162	1300
19	39	18	7.5	38	27	13	68	73	5420	351	160	1160
20	33	11	8.5	38	10	201	110	133	11700	251	154	595
21	36	9.0	8.0	40	4.7	186	273	312	13300	237	151	458
22	36	9.0	8.0	40	3.1	76	655	2010	14600	216	144	298
23	35	9.0	8.0	41	2.5	41	928	2530	17100	199	127	238
24	50	10	8.0	42	3.7	26	617	1810	36100	192	89	313
25	49	9.0	7.5	43	8.8	15	342	880	47800	330	237	327
26	54	9.5	7.5	45	6.1	8.7	235	492	40300	510	222	1480
27	54	10	7.0	46	4.3	5.6	178	354	31400	843	466	1030
28	47	9.5	5.0	50	2.9	4.5	144	284	26400	1680	707	509
29	45	9.5	3.5	45	---	5.0	119	573	20800	1780	498	526
30	59	9.5	3.8	47	---	9.4	112	1490	12800	1790	887	446
31	65	---	3.2	46	---	14	---	3140	---	1780	815	---
TOTAL	1176	706.0	240.5	883.4	1138.1	1076.2	3903.8	20509	303250	100739	23076	35838
MEAN	37.9	23.5	7.76	28.5	40.6	34.7	130	662	10110	3250	744	1195
MAX	65	57	11	50	115	201	928	3140	47800	6390	1800	5090
MIN	24	7.5	3.2	1.8	2.5	1.8	2.4	73	126	192	89	215
AC-FT	2330	1400	477	1750	2260	2130	7740	40680	601500	199800	45770	71080

CAL YR 1976 TOTAL 134724.0 MEAN 368 MAX 10900 MIN 3.2 AC-FT 267200
WTR YR 1977 TOTAL 492536.0 MEAN 1349 MAX 47800 MIN 1.8 AC-FT 976900

06917000 LITTLE OSAGE RIVER AT FULTON, KS

LOCATION.--Lat 38°01'09", long 94°42'48", in SE¼NE¼NE¼ sec.25, T.23 S., R.24 E., Bourbon County, Hydrologic Unit 10290103, on right bank at downstream side of bridge on U.S. Highway 69, 0.8 mi (1.3 km) north of Fulton.

DRAINAGE AREA.--295 mi² (764 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1948 to current year.

REVISED RECORDS.--WSP 1440: 1949(P), 1950(M). WRD KS-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 776.37 ft (236.638 m) above mean sea level. Prior to May 28, 1952, nonrecording gage at present site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--28 years (1949-77), 206 ft³/s (5.834 m³/s), 149,200 acre-ft/yr (184 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,300 ft³/s (745 m³/s) July 1, 1969, gage height, 30.03 ft (9.153 m); no flow at times in 1949, 1952-57, 1959, 1961-64, 1966-68, 1974, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 20	1500	5,640	160	20.98	6.395
June 22	1100	* 5,700	161	21.08	6.425

Minimum discharge, 0.04 ft³/s (0.001 m³/s) Oct. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.26	.31	.21	.50	1.7	.99	16	132	131	5.2	18
2	.12	.28	.28	.21	.47	1.5	1.1	52	219	107	4.1	26
3	.12	.28	.24	.20	.45	1.5	1.6	74	70	93	5.5	9.8
4	.13	.28	.24	.29	.52	1.5	2.0	47	42	79	8.3	5.2
5	.13	.28	.24	.32	.69	1.6	1.9	35	29	61	8.9	4.6
6	.16	.28	.24	.34	.67	1.7	1.6	28	20	48	10	4.5
7	.21	.28	.24	.36	.59	1.8	1.4	23	15	38	10	4.0
8	.22	.24	.24	.36	.57	1.7	1.1	31	12	34	10	2.3
9	.24	.24	.26	.40	.62	1.7	.82	387	9.5	215	9.4	1.8
10	.24	.24	.28	.43	.75	1.6	.63	158	8.2	139	8.1	2.2
11	.24	.23	.28	.45	.80	3.8	.51	67	7.7	83	33	2.4
12	.24	.20	.34	.43	1.0	5.1	.38	42	6.5	107	33	2.5
13	.23	.17	.36	.40	1.1	1.9	.34	30	24	85	8.7	4.8
14	.17	.26	.38	.45	1.0	1.5	.38	22	9.3	52	4.5	8.6
15	.16	.28	.40	.46	1.0	1.5	.41	17	4.5	38	4.5	90
16	.12	.28	.42	.55	1.0	1.8	.47	18	3.7	28	5.7	164
17	.08	.25	.45	.51	.93	3.2	.63	273	3.1	22	7.2	74
18	.06	.24	.45	.50	.90	3.2	.73	95	31	18	6.7	54
19	.12	.24	.45	.45	1.1	3.0	1.2	53	2680	14	4.7	36
20	.14	.20	.45	.45	1.2	2.9	3.5	512	5280	12	4.4	13
21	.16	.20	.45	.45	1.2	2.6	57	509	4180	9.9	4.7	8.6
22	.16	.17	.45	.45	1.2	2.4	63	470	5280	8.6	6.0	9.1
23	.16	.16	.40	.45	1.1	2.1	82	205	5090	7.0	7.1	11
24	.16	.16	.40	.49	1.2	1.9	78	135	4770	6.2	6.9	407
25	.16	.16	.40	.50	1.3	1.6	53	96	1310	4.2	6.5	103
26	.16	.44	.41	.55	1.3	1.3	38	68	910	3.7	6.1	51
27	.16	.49	.36	.55	1.7	1.2	28	49	670	3.3	5.7	113
28	.18	.39	.35	.59	1.7	1.4	23	40	369	3.2	7.2	72
29	.21	.32	.32	.58	---	1.7	18	164	235	4.1	9.8	84
30	.31	.32	.31	.55	---	1.7	16	108	178	5.6	6.8	68
31	.22	---	.25	.53	---	1.4	---	120	---	5.7	2.6	---
TOTAL	5.28	7.82	10.65	13.46	26.56	63.5	477.69	3944	31598.5	1465.5	261.3	1454.4
MEAN	.17	.26	.34	.43	.95	2.05	15.9	127	1053	47.3	8.43	48.5
MAX	.31	.49	.45	.59	1.7	5.1	82	512	5280	215	33	407
MIN	.06	.16	.24	.20	.45	1.2	.34	16	3.1	3.2	2.6	1.8
AC-FT	10	16	21	27	53	126	947	7820	62680	2910	518	2880

CAL YR 1976 TOTAL 28187.92 MEAN 77.0 MAX 2740 MIN .00 AC-FT 55910
WTR YR 1977 TOTAL 39328.66 MEAN 108 MAX 5280 MIN .06 AC-FT 78010

06917380 MARMATON RIVER NEAR MARMATON, KS

LOCATION.--Lat 37°49'03", long 94°47'30", in SW¼NE¼NW¼ sec.4, T.26 S., R.24 E., Bourbon County, Hydrologic Unit 10290104, on left bank 150 ft (46 m) downstream from Cedar Creek, 2.0 mi (3.2 km) southeast of Marmaton, and at mile 55.7 (89.6 km).

DRAINAGE AREA.--292 mi² (756 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 780.66 ft (237.945 m) above mean sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--6 years, 303 ft³/s (8.581 m³/s), 219,500 acre-ft/yr (271 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft³/s (680 m³/s) March 10, 1974, gage height, 34.69 ft (10.574 m); minimum, 0.04 ft³/s (0.001 m³/s) Aug. 6, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1915 about 40,000 ft³/s (1,130 m³/s) on Sept. 7, 1915 and May 1935, from information by State of Kansas and Missouri-Kansas-Texas Railroad.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 17	0300	3,100	87.8	11.75	3.581	June 22	1200	*14,100	399	31.13	9.488
June 19	1700	4,680	133	15.50	4.724	June 25	1600	10,000	283	27.07	8.251
June 20	1500	8,580	243	24.17	7.367	Sept. 27	1000	3,840	109	13.59	4.142

Minimum discharge, 0.06 ft³/s (0.002 m³/s) Jan. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	1.3	.22	.06	.10	.39	3.3	16	326	295	2.6	458
2	.70	1.4	.22	.06	.10	.37	6.0	26	419	862	2.6	240
3	.76	1.4	.22	.10	.13	.43	5.3	29	147	473	2.6	134
4	.84	1.3	.17	.13	.22	.37	4.5	22	60	248	2.7	65
5	1.6	1.1	.17	.13	.29	.29	3.9	18	41	182	2.5	27
6	1.6	1.1	.24	.13	.29	.29	3.4	14	31	133	2.4	20
7	1.4	.69	.31	.13	.29	.29	3.1	11	23	72	2.4	15
8	1.4	.38	.36	.13	.29	.22	2.7	9.3	18	47	2.2	11
9	1.4	.24	.43	.13	.36	.18	2.6	7.4	14	205	1.9	9.0
10	1.4	.29	.43	.22	.43	.17	2.3	18	12	188	2.0	6.8
11	1.2	.22	.43	.17	.60	1.6	1.8	13	9.7	123	907	5.2
12	1.1	.22	.43	.29	1.5	11	1.8	8.2	7.9	81	320	4.8
13	.89	.22	.43	.29	1.5	16	1.7	6.1	6.9	45	168	4.4
14	.73	.22	.43	.29	1.4	12	1.5	5.0	20	30	68	6.3
15	.54	.22	.36	.20	.98	8.3	1.2	3.8	49	24	27	140
16	.46	.22	.29	.15	.70	6.7	1.0	447	34	19	19	267
17	.37	.22	.29	.10	.58	10	1.3	1450	22	15	15	192
18	.37	.25	.29	.10	.43	8.4	1.7	310	44	12	11	197
19	.50	.25	.29	.10	.31	7.3	2.0	184	2610	10	9.5	221
20	.50	.22	.22	.10	.23	5.1	2.0	1330	6450	8.3	7.5	114
21	.49	.22	.19	.08	.22	4.4	20	785	3760	6.9	6.1	59
22	.37	.17	.16	.08	.21	4.6	32	539	12000	5.8	4.9	34
23	.43	.13	.10	.08	.17	4.6	51	275	7460	6.3	4.6	861
24	.47	.13	.08	.10	.20	3.8	95	194	2780	5.6	4.2	1500
25	.36	.14	.08	.10	.22	2.9	62	221	6260	4.2	4.0	334
26	.31	.32	.08	.13	.34	2.3	45	97	2480	3.8	3.6	167
27	.36	.33	.08	.17	.43	2.0	34	47	1690	4.0	3.4	1890
28	.39	.24	.08	.22	.43	2.1	25	40	891	3.6	3.8	402
29	.44	.22	.08	.17	---	3.2	19	985	1070	3.6	6.3	287
30	1.0	.22	.08	.13	---	2.9	15	479	411	3.1	14	231
31	1.2	---	.08	.10	---	2.9	---	342	---	2.6	12	---
TOTAL	24.28	13.58	7.32	4.37	12.95	125.10	451.1	7931.8	49546.5	3121.8	1642.8	7902.5
MEAN	.78	.45	.24	.14	.46	4.04	15.0	256	1652	101	53.0	263
MAX	1.6	1.4	.43	.29	1.5	16	95	1450	12000	862	907	1890
MIN	.31	.13	.08	.06	.10	.17	1.0	3.8	6.9	2.6	1.9	4.4
AC-FT	48	27	15	8.7	26	248	895	15730	98280	6190	3260	15670

CAL YR 1976 TOTAL 29385.13 MEAN 80.3 MAX 7450 MIN .08 AC-FT 58290
WTR YR 1977 TOTAL 70784.10 MEAN 194 MAX 12000 MIN .06 AC-FT 140400

ARKANSAS RIVER BASIN

07137000 FRONTIER DITCH NEAR COOLIDGE, KS

LOCATION.--Lat 38°02'18", long 102°02'19", in NE¼ sec.21, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on left bank 0.3 mi (0.5 km) east of Colorado-Kansas State line, 0.5 mi (0.8 km) downstream from Holly drain diversion, 1.5 mi (2.4 km) west of Coolidge, and 2.3 mi (3.7 km) downstream from diversion from Arkansas River.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1731: 1951.

GAGE.--Water-stage recorders and Parshall flume. Datum of gage is 3,353.14 ft (1,022.037 m) above mean sea level.

REMARKS.--Records fair. This ditch diverts water from the Arkansas River in Colorado for use in Kansas. These records and records for the Arkansas River near Coolidge represent total flow of the Arkansas River at the Colorado-Kansas State line.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 84 ft³/s (2.38 m³/s) Aug. 1, 1975; no flow for many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	12	.21	.05	.00	.00	.00	13	19	12	25	13
2	4.3	9.5	.00	.00	.00	.00	.00	.38	19	10	25	11
3	4.6	8.4	.00	.00	.00	.00	.00	.88	18	9.2	15	7.7
4	6.1	7.[illegible]	.00	.00	.00	.00	.00	.00	16	9.2	37	15
5	16	7.7	.00	.00	.00	.00	.00	.00	13	9.2	22	7.2
6	15	7.0	.00	.00	.00	.00	.00	5.1	11	9.0	29	7.6
7	6.8	5.8	.00	.00	.00	.00	.00	11	11	9.8	18	7.9
8	6.3	7.2	.00	.00	.00	.00	2.6	11	11	8.2	13	4.7
9	5.8	6.5	.00	.00	.00	.00	7.2	12	10	8.7	22	6.6
10	5.2	6.5	.00	.00	.00	.00	7.7	12	10	8.7	21	5.8
11	4.1	7.0	.00	.00	.00	.00	7.9	14	12	7.0	16	4.9
12	4.1	7.0	.00	.00	.00	.00	33	14	11	7.9	30	5.2
13	4.1	7.2	.00	.00	.00	.00	55	20	10	6.5	28	31
14	4.8	8.7	1.3	.00	.00	.00	60	40	12	4.8	26	26
15	5.2	7.4	2.0	.00	.00	.00	60	34	10	5.4	22	10
16	4.8	6.1	2.0	.00	.00	.00	41	25	11	6.5	15	6.5
17	4.8	5.8	2.0	.00	.00	.00	39	22	14	6.1	11	5.6
18	8.7	5.4	2.0	.00	.00	.00	38	19	19	5.6	11	5.0
19	12	5.6	2.0	.00	.00	.00	40	15	17	4.8	16	5.2
20	12	5.6	2.0	.00	.00	.00	38	14	22	4.3	38	5.8
21	12	5.6	2.0	.00	.00	.00	22	12	25	3.9	36	5.0
22	12	5.8	2.0	.00	.00	.00	14	32	21	5.0	35	4.6
23	11	6.1	2.0	.00	.00	.00	12	34	16	5.0	40	4.8
24	10	6.3	2.0	.00	.00	.00	9.2	28	15	4.1	4.8	5.4
25	13	5.8	2.0	.00	.00	.00	14	23	19	3.2	1.2	6.3
26	7.4	7.2	2.0	.00	.00	.00	15	.56	17	6.3	1.1	5.8
27	7.7	6.8	2.0	.00	.00	.00	21	.35	15	18	.63	4.1
28	17	1.5	2.0	.00	.00	.00	17	.21	13	33	.21	2.5
29	18	.81	2.0	.00	---	.00	16	.07	14	41	15	2.1
30	15	.49	1.5	.00	---	.00	13	.00	13	22	23	1.5
31	12	---	.25	.00	---	.00	---	6.0	---	39	19	---
TOTAL	274.3	191.50	33.26	.05	.00	.00	582.60	418.55	444	333.4	615.94	232.8
MEAN	8.85	6.38	1.07	.002	.000	.000	19.4	13.5	14.8	10.8	19.9	7.76
MAX	18	12	2.0	.05	.00	.00	60	40	25	41	40	31
MIN	4.1	.49	.00	.00	.00	.00	.00	.00	10	3.2	.21	1.5
AC-FT	544	380	66	.10	.00	.00	1160	830	881	661	1220	462

CAL YR 1976 TOTAL 3368.79 MEAN 9.20 MAX 51 MIN .00 AC-FT 6680
WTR YR 1977 TOTAL 3126.40 MEAN 8.57 MAX 60 MIN .00 AC-FT 6200

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS

LOCATION.--Lat 38°01'34", long 102°00'41", in NE¼NW¼ sec.26, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on right bank at downstream side of bridge, 1.0 mi (1.6 km) south of Coolidge, and 1.9 mi (3.1 km) downstream from Colorado-Kansas State line.

DRAINAGE AREA.--25,410 mi² (65,812 km²), of which 1,708 mi² (4,424 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to October 1903, March to May 1921, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1341: 1903, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,330.84 ft (1,015.240 m) above mean sea level. May 5 to Oct. 31, 1903, nonrecording gage, and Mar. 1 to May 31, 1921, water-stage recorder at present site at different datums. Oct. 1, 1950, to Mar. 31, 1966, water-stage recorder at site 0.3 mi (0.5 km) upstream at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Combined flow of river and Frontier ditch (see sta 07137000) represents entire flow that enters Kansas. Flow regulated by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 500,000 acres (2,020 km²), and return flow from irrigated areas.

AVERAGE DISCHARGE.--27 years, 194 ft³/s (5.494 m³/s), 140,600 acre-ft/yr (173 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 158,000 ft³/s (4,470 m³/s) June 17, 1965, gage height, 14.8 ft (4.51 m), present site and datum, from floodmarks, from rating curve extended above 13,000 ft³/s (370 m³/s) on basis of slope-area measurement of peak flow; no flow for many days in 1903, 1954, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 664 ft³/s (18.8 m³/s) May 29, gage height, 4.03 ft (1.228 m); minimum 1.4 ft³/s (0.040 m³/s) July 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	12	15	5.5	10	9.2	14	37	92	13	23	19
2	15	12	14	6.5	10	9.6	14	166	76	12	20	14
3	17	10	14	7.0	10	8.0	16	249	64	10	18	13
4	10	9.6	14	7.0	11	8.4	17	83	48	8.4	159	12
5	11	9.6	14	7.0	11	8.4	15	54	46	7.2	182	12
6	14	9.2	14	7.0	11	8.4	14	31	36	8.0	250	8.8
7	13	8.8	14	7.0	11	8.4	14	20	29	6.8	174	6.8
8	12	7.6	14	6.0	11	8.8	11	16	27	6.4	86	8.0
9	11	10	13	6.0	10	9.2	6.4	14	26	6.0	35	9.6
10	10	10	13	6.5	10	9.6	5.4	14	24	6.4	28	6.8
11	10	8.0	13	8.0	17	12	5.4	14	22	5.4	25	6.0
12	10	6.0	12	10	11	11	6.4	14	24	4.8	193	7.2
13	10	6.4	8.4	12	11	10	181	15	21	3.6	137	58
14	10	11	10	12	10	10	151	134	18	4.2	67	38
15	10	12	12	12	10	10	177	29	20	2.8	42	10
16	10	6.4	12	11	10	9.6	214	20	20	2.2	28	8.8
17	10	6.0	11	10	9.6	12	225	18	17	2.2	21	7.2
18	10	5.4	11	9.5	9.2	14	108	16	24	2.0	20	6.0
19	10	4.8	11	9.5	9.6	16	68	15	20	1.6	21	5.1
20	10	4.5	10	9.5	9.6	15	67	26	18	1.6	188	4.5
21	9.6	3.9	10	9.2	9.6	13	52	65	29	1.6	341	4.2
22	10	3.9	8.4	10	10	12	34	92	25	1.8	350	4.2
23	10	3.6	7.6	10	10	12	34	125	14	2.2	472	4.2
24	10	3.3	7.6	11	9.2	12	30	102	13	2.0	440	3.9
25	11	3.6	7.2	12	9.6	10	32	294	15	2.6	432	3.6
26	11	4.5	7.6	11	9.6	14	29	208	11	5.4	420	4.2
27	11	27	7.2	12	9.6	16	27	177	9.6	6.4	368	4.2
28	11	20	7.2	11	9.6	16	27	172	9.2	17	182	3.9
29	12	17	7.0	9.5	---	15	29	322	9.6	64	83	3.9
30	12	16	6.0	11	---	14	29	364	8.4	21	41	3.6
31	12	---	5.5	10	---	14	---	156	---	68	25	---
TOTAL	346.6	272.1	330.7	285.7	289.2	355.6	1652.6	3062	815.8	306.6	4869	300.7
MEAN	11.2	9.07	10.7	9.22	10.3	11.5	55.1	98.8	27.2	9.89	157	10.0
MAX	17	27	15	12	17	16	225	364	92	68	472	58
MIN	9.6	3.3	5.5	5.5	9.2	8.0	5.4	14	8.4	1.6	18	3.6
AC-FT	687	540	656	567	574	705	3280	6070	1620	608	9660	596

CAL YR 1976 TOTAL 12333.6 MEAN 33.7 MAX 1800 MIN 3.3 AC-FT 24460
WTR YR 1977 TOTAL 12886.6 MEAN 35.3 MAX 472 MIN 1.6 AC-FT 25560

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-68, 1970-73, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1968, October 1975 to current year.
WATER TEMPERATURES: October 1964 to September 1968, October 1975 to current year.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since October 1975.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 6,690 micromhos July 3, 1977; minimum, 454 micromhos June 18, 1965.
WATER TEMPERATURES: Maximum, 34.0°C July 9, 1967; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 6,690 micromhos July 3; minimum daily, 600 micromhos Aug. 25.
WATER TEMPERATURES: Maximum daily, 29.0°C July 6; minimum daily, 1.0°C on several days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)
OCT												
01...	17	4730	8.3	17.0	110	1700	1400	350	190	600	6.4	15
NOV												
04...	11	3900	8.4	12.5	80	1600	1400	350	170	560	6.1	12
DEC												
22...	7.5	4620	8.1	4.5	10	1700	1500	410	160	590	6.3	11
FEB												
01...	10	5100	7.8	.5	15	1800	1500	410	180	600	6.2	11
15...	9.9	4700	8.3	4.0	25	1800	1500	410	180	610	6.3	12
MAR												
24...	11	4700	7.8	18.0	15	1700	1500	400	180	610	6.4	11
APR												
13...	178	2740	8.1	12.5	1100	1000	810	240	100	280	3.8	9.9
MAY												
09...	14	4600	8.0	26.0	25	1700	1500	390	170	590	6.3	13
JUL												
06...	9.5	4600	8.0	32.0	20	1700	1500	380	190	590	6.2	13
AUG												
02...	19	2250	7.9	29.0	1600	870	710	200	89	260	3.6	14
SEP												
20...	4.8	4050	8.2	18.0	7	1500	1200	370	130	480	5.5	13

DATE	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
OCT												
01...	257	0	2300	160	.9	11	4060	5.52	189	1.0	1.9	.30
NOV												
04...	254	5	2200	170	.8	12	4030	5.48	120	1.9	1.0	.08
DEC												
22...	269	0	2400	200	.6	15	4320	5.88	87.5	1.7	--	.03
FEB												
01...	308	0	2400	190	.7	16	4320	5.88	120	1.8	.42	.03
15...	289	0	2400	220	.6	15	4200	5.71	113	1.7	.54	.05
MAR												
24...	254	0	2500	210	.6	11	4360	5.93	137	1.0	.71	.05
APR												
13...	250	0	1300	90	1.1	5.4	2320	3.16	1120	.28	3.3	1.4
MAY												
09...	260	0	2300	190	.8	14	4170	5.67	159	1.5	.62	.02
JUL												
06...	260	0	2500	180	.9	18	4250	5.78	109	3.3	.57	.03
AUG												
02...	190	0	1100	70	.7	13	1860	2.53	99.4	2.2	4.0	1.8
SEP												
20...	260	0	2100	130	.9	16	3840	5.22	50.0	2.0	--	.02

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	CHLOR-A PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)
OCT									
01...	10.4	2200	1000	1300	--	14000	--	--	--
NOV									
04...	11.7	--	--	--	6.1	2100	.253	.132	913
DEC									
22...	9.5	--	20	490	--	390	--	--	--
FEB									
01...	12.5	--	B12	720	3.9	1000	--	--	--
15...	11.7	--	B8	550	--	2700	--	--	--
MAR									
24...	12.6	--	B9	200	--	--	--	--	--
APR									
13...	7.7	--	1800	6200	--	--	--	--	--
MAY									
09...	9.8	--	110	230	5.8	5000	--	--	--
JUN									
06...	10.6	--	400	840	--	4600	--	--	--
JUL									
06...	9.8	--	220	400	--	4500	--	--	--
12...	8.1	--	--	--	--	--	--	--	--
AUG									
02...	6.8	--	--	--	40	--	--	--	--
SEP									
20...	11.6	--	220	2300	--	--	--	--	--

B Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
NOV										
04...	2	1	1	<10	<10	0	10	0	10	<50
FEB										
01...	1	1	0	10	9	1	10	0	10	<50
MAY										
09...	1	--	1	10	8	2	20	10	10	<50
JUL										
12...	--	--	--	--	--	--	--	--	--	--
AUG										
02...	--	--	0	10	4	6	20	20	0	50

DATE	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)
NOV										
04...	<48	2	20	20	0	4000	10	200	200	2
FEB										
01...	<50	0	10	6	4	580	30	100	97	3
MAY										
09...	--	0	20	18	2	670	30	100	92	8
JUL										
12...	--	--	--	--	--	--	20	--	--	--
AUG										
02...	49	1	40	32	8	22000	620	100	84	16

DATE	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
NOV										
04...	80	170	90	.0	30	0	30	40	20	20
FEB										
01...	150	170	20	.0	26	0	26	30	20	10
MAY										
09...	70	100	--	.0	14	--	16	30	--	20
JUL										
12...	40	--	--	--	--	--	--	--	--	--
AUG										
02...	20	1100	1100	.0	--	--	19	160	150	10

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALDRIN (UG/L)	TOTAL ATRA-ZINE (UG/L)	TOTAL CHLOR-DANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DI-AZINON (UG/L)	TOTAL DI-ELDRIN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL ETHION (UG/L)	TOTAL HEPTA-CHLOR (UG/L)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)
NOV												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
01...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY												
19...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG												
02...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	TOTAL LINDANE (UG/L)	TOTAL MALA-THION (UG/L)	TOTAL METH-OXY-CHLOR (UG/L)	TOTAL METHYL PARA-THION (UG/L)	TOTAL METHYL TRI-THION (UG/L)	TOTAL PARA-THION (UG/L)	TOTAL SILVEX (UG/L)	SIMA-ZINE TOTAL((UG/L)	TOTAL TOX-APHENE (UG/L)	TOTAL TRI-THION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)
NOV												
04...	ND	ND	ND	ND	ND	ND	ND	N	ND	ND	ND	ND
FEB												
01...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY												
19...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG												
02...	.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Not detected; detection limit is 0.01 UG/L.

DATE	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	ATRA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG)	DDD IN BOTTOM MA-TERIAL (UG/KG)	DDE IN BOTTOM MA-TERIAL (UG/KG)	DDT IN BOTTOM MA-TERIAL (UG/KG)	DI-AZINON IN BOTTOM MA-TERIAL (UG/KG)	DI-ELDRIN IN BOTTOM MA-TERIAL (UG/KG)	ENDRIN IN BOTTOM MA-TERIAL (UG/KG)	ETHION IN BOTTOM MA-TERIAL (UG/KG)	HEPTA-CHLOR IN BOTTOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE IN BOT-TOM MA-TERIAL (UG/KG)
NOV												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY												
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	LINDANE IN BOTTOM MA-TERIAL (UG/KG)	MALA-THION IN BOTTOM MA-TERIAL (UG/KG)	METHOX-YCHLOR IN BOT-TOM MA-TERIAL (UG/KG)	METHYL PARA-THION IN BOT-TOM MA-TERIAL (UG/KG)	METHYL TRI-THION IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION IN BOTTOM MA-TERIAL (UG/KG)	SILVEX IN BOTTOM MA-TERIAL (UG/KG)	SIMA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	TOX-APHENE IN BOTTOM MA-TERIAL (UG/KG)	TRI-THION IN BOTTOM MA-TERIAL (UG/KG)	2,4-D IN BOTTOM MA-TERIAL (UG/KG)	2,4,5-T IN BOTTOM MA-TERIAL (UG/KG)
NOV												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY												
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Not detected; detection limit is 0.10 UG/KG.

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

PHYTOPLANKTON ANALYSES (OCT,1976 - JUN,1977)

	OCT 1,76	NOV 4,76	DEC 22,76	FEB 1,77
DATE	OCT 1,76	NOV 4,76	DEC 22,76	FEB 1,77
TIME	0930	1315	1400	1400
TOTAL CELLS/ML	14000	2100	390	1000
DIVERSITY: DIVISION	0.0	0.5	1.3	1.2
.CLASS	0.0	0.5	1.3	1.2
..ORDER	0.0	0.6	1.4	1.3
...FAMILY	1.0	1.9	3.1	2.2
....GENUS	1.2	2.4	3.5	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	--	-	200	10	6	1	21	2
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	25	1	14	4	48	5
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..PENNALES								
...NAVICULACEAE								
....ENTOMONEIS	580	4	590#	29	28	7	62	6
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	25	1	6	1	14	1
....MELOSIRA	--	-	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	36	9	7	1
...CYMBELLACEAE								
....AMPHORA	--	-	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	--	-
....EPITHEMIA	--	-	--	-	*	0	--	-
...FRAGILARIACEAE								
....FRAGILARIA	--	-	--	-	11	3	*	0
....SYNEDRA	--	-	*	0	17	4	*	0
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	--	-	30	8	--	-
...NAVICULACEAE								
....CALONEIS	--	-	*	0	8	2	14	1
....GYROSIGMA	--	-	50	2	6	1	28	3
....NAVICULA	5200#	38	250	12	55	14	330#	32
...NITZSCHIACEAE								
....DENTICULA	--	-	--	-	*	0	--	-
....HANTZSCHIA	--	-	--	-	--	-	7	1
....NITZSCHIA	8100#	58	690#	33	55	14	140	14
...SURIRELLACEAE								
....SURIRELLA	--	-	250	12	25	6	90	9
CYANOPHYTA (BLUE-GREEN ALGAE)								
.MYXOPHYCEAE								
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	61#	16	280#	26
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOMONODACEAE								
....CRYPTOMONAS	--	-	--	-	30	8	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

PHYTOPLANKTON ANALYSES (OCT,1976 - JUN,1977)

DATE	FEB 15,77	MAY 9,77	JUN 6,77
TIME	1100	1330	1330
TOTAL CELLS/ML	2700	5000	4600
DIVERSITY: DIVISION	0.0	0.7	0.6
.CLASS	0.0	0.7	0.6
..ORDER	0.0	1.3	0.7
...FAMILY	1.6	1.6	1.7
....GENUS	2.3	1.7	1.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	90	2	46	1
...SCENEDESMACEAE						
....SCENEDESMUS	--	-	--	-	180	4
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	760#	15	410	9
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..PENNALES						
...NAVICULACEAE						
....ENTOMONEIS	250	9	--	-	--	-
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	580	12	--	-
....MELOSIRA	--	-	90	2	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
...CYMBELLACEAE						
....AMPHORA	56	2	--	-	--	-
....CYMBELLA	--	-	--	-	46	1
....EPITHEMIA	--	-	--	-	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	28	1	--	-	--	-
...NAVICULACEAE						
....CALONEIS	140	5	--	-	--	-
....GYROSIGMA	84	3	--	-	--	-
....NAVICULA	1100#	39	310	6	550	12
...NITZSCHIACEAE						
....DENTICULA	--	-	--	-	--	-
....HANTZSCHIA	--	-	--	-	--	-
....NITZSCHIA	640#	23	3100#	63	3100#	66
...SURIRELLACEAE						
....SURIRELLA	480#	17	--	-	320	7
CYANOPHYTA (BLUE-GREEN ALGAE)						
.MYXOPHYCEAE						
..OSCILLATORIALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.CRYPTOPHYCEAE						
..CRYPTOMONIDALES						
...CRYPTOMONODACEAE						
....CRYPTOMONAS	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3630	3760	1750	4860	4250	3370	4640	4690	2390	6040	1740	2800
2	2800	3600	2110	4860	4000	3360	4910	2610	2640	6610	1970	3200
3	3000	2610	2510	4850	4070	4060	4710	1030	2670	6690	2000	3600
4	3280	2260	2700	4820	4160	4290	4780	1110	2800	6540	1200	4000
5	3510	2030	2600	4810	4250	3970	4940	1250	4290	6520	1000	4400
6	3650	2010	2540	4810	4330	2830	4840	1730	4980	5140	800	4800
7	3790	1960	2660	4830	4400	3590	4810	1900	4460	4340	1000	5200
8	4170	2090	2730	4830	4450	3550	4840	2090	4330	4010	1500	4380
9	4700	2470	2790	4860	4660	4270	4890	3740	4290	3990	2000	3650
10	5010	2980	2830	4890	4780	4540	5030	4160	4270	3750	2200	3640
11	5090	2670	2790	4890	4780	4710	4920	3850	4280	4120	2400	4020
12	5070	2470	2780	4790	4780	4960	3650	3280	4280	4120	1500	3800
13	5030	2240	2840	4600	4770	3230	2380	3450	4330	4040	1700	3350
14	5050	2380	3170	4520	4780	3960	2430	1570	4100	4050	2000	3580
15	5080	1910	3410	4610	4030	4700	2440	2620	3940	4150	2200	3770
16	5160	2560	3400	4650	3430	4920	3390	3200	3710	4130	2400	3700
17	5220	3000	3300	4520	3460	4850	4370	3410	3910	4050	2600	3760
18	5280	3220	3680	4500	3450	4870	4600	3490	2660	3980	2800	3540
19	5380	3300	3860	4530	3440	4820	4280	3570	2560	4050	2700	3330
20	5460	3360	3880	4610	3430	4610	3520	3120	2530	3980	2000	5020
21	5260	3400	3940	4620	3440	4830	3370	1740	2520	3960	1400	4190
22	4480	3460	4290	4630	3450	4630	3910	2050	2500	4000	1000	4250
23	4050	3510	5060	4660	3400	4660	4270	1650	2970	3930	800	4040
24	3720	3560	4940	4680	3390	4600	4220	1720	4000	3920	700	3410
25	3630	3610	4900	4640	3400	4420	4390	1330	3980	3950	600	2480
26	3430	3660	4940	4600	3410	4590	4300	1710	3900	3580	700	2570
27	3430	2950	4860	4600	3400	4680	4490	2100	5460	3400	900	2600
28	3400	2310	4860	4600	3410	4510	4410	1820	6230	2070	1200	2800
29	3370	2150	4850	4590	---	4230	4660	1380	6240	1460	1600	2900
30	3500	1910	4770	4600	---	4200	4850	1200	5960	2020	2000	3000
31	3480	---	4820	4600	---	4340	---	1880	---	1600	2400	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	9.5	1.5	1.5	3.5	5.0	11.0	19.0	23.0	26.0	25.0	24.5
2	16.5	9.0	4.0	1.5	3.5	7.0	10.5	20.0	26.5	27.0	26.0	24.0
3	17.0	7.0	4.5	1.5	4.0	2.5	7.5	20.5	26.0	27.0	26.5	23.0
4	12.5	9.5	4.5	3.0	4.0	4.5	8.0	20.0	26.0	27.5	27.5	22.5
5	12.0	10.0	3.0	2.5	4.5	5.5	11.0	19.5	25.0	28.0	27.5	22.0
6	12.0	10.0	2.5	3.0	5.5	7.5	14.0	20.5	23.0	29.0	27.5	21.5
7	8.5	9.0	3.5	2.5	4.5	9.5	17.0	21.0	22.0	27.0	27.5	21.0
8	11.0	9.5	4.0	1.5	5.0	11.0	18.0	22.0	25.0	25.0	27.5	23.0
9	13.5	10.0	5.0	1.0	6.0	10.0	17.5	21.5	24.5	26.5	27.5	25.0
10	14.5	9.5	4.0	1.0	6.5	7.5	17.0	19.5	25.5	27.5	27.0	25.0
11	15.5	5.5	3.5	1.5	6.5	4.0	16.0	20.0	23.5	26.0	27.0	26.0
12	14.5	5.5	4.0	1.0	7.0	7.5	18.5	20.5	24.5	26.5	27.0	25.0
13	14.5	4.0	4.5	1.0	9.0	9.5	15.0	20.0	24.0	26.0	26.5	20.0
14	15.0	4.0	4.0	1.0	7.0	10.0	17.0	19.5	24.5	26.0	26.5	21.0
15	11.5	5.5	4.0	1.0	6.0	10.5	16.5	20.0	25.0	26.5	26.5	21.5
16	9.5	6.0	4.0	1.0	8.0	9.5	12.0	20.0	26.0	27.5	26.0	22.0
17	7.5	7.5	5.0	1.5	8.5	10.5	16.0	19.5	26.0	26.5	26.0	23.0
18	6.5	8.5	4.0	2.0	8.0	10.5	14.0	18.5	22.5	26.5	26.0	24.5
19	6.5	8.5	3.0	3.5	8.0	9.5	12.5	20.0	24.0	26.5	26.0	23.5
20	7.5	7.5	2.5	3.5	8.0	8.5	11.0	16.5	23.0	27.5	26.0	18.0
21	8.5	6.5	2.5	4.0	8.5	8.5	9.0	16.0	24.5	26.0	26.0	22.0
22	9.5	6.0	3.0	4.5	9.5	10.5	10.0	19.5	25.0	27.0	23.0	25.5
23	10.5	6.5	3.0	5.0	5.0	11.5	11.0	22.5	25.0	28.0	25.0	24.5
24	7.5	6.5	4.0	4.0	5.5	12.5	12.0	22.5	21.5	27.5	26.0	22.5
25	8.0	6.5	4.0	3.5	6.0	14.0	13.0	21.0	22.5	26.0	27.0	25.5
26	4.0	3.5	4.5	3.5	6.5	13.0	14.0	22.0	25.0	24.5	28.0	22.0
27	4.5	1.0	5.5	4.0	5.5	15.0	15.0	23.0	24.0	26.0	27.5	23.0
28	6.5	1.0	5.0	2.0	6.5	14.5	16.0	22.0	25.0	28.0	27.0	19.0
29	8.0	1.0	3.5	2.0	---	10.0	17.0	18.5	25.5	26.5	26.5	21.0
30	9.0	1.0	1.5	3.0	---	9.5	18.0	20.5	26.0	27.0	26.0	22.0
31	9.0	---	2.0	4.0	---	9.5	---	24.0	---	24.5	25.0	---

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
DEC					
22...	1440	7.5	4300	38	.77
FEB					
01...	1405	10	4500	88	2.4
MAR					
24...	1430	11	4500	172	5.4
APR					
13...	1000	178	2740	2590	1250
13...	1500	142	--	4170	1600
MAY					
02...	1325	179	--	6340	3060
09...	1400	14	--	156	5.9
21...	1505	88	--	1700	404
25...	1320	450	--	5100	6200
JUN					
06...	1330	40	4400	437	47
21...	1210	26	2075	2100	150
AUG					
02...	1330	19	--	2020	108
04...	1400	222	--	26900	16100
23...	1300	560	--	5760	8710
SEP					
07...	1100	7.6	--	137	2.8

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM
APR											
13...	1000	178	2590	55	75	93	97	100	--	--	--
13...	1500	142	4170	26	34	43	55	55	55	78	100
MAY											
25...	1320	450	5100	49	68	85	97	98	98	100	--

07138000 ARKANSAS RIVER AT SYRACUSE, KS

LOCATION.--Lat 37°57'58", long 101°45'23", in NW¼SE¼NW¼ sec.18, T.24 S., R.40 W., Hamilton County, Hydrologic Unit 11030001, at left end of bridge on U.S. Highway 270, 0.5 mi (0.8 km) south of Syracuse, and at mile 1,080.9 (1,739.2 km).

DRAINAGE AREA.--25,763 mi² (66,726 km²), of which 1,857 mi² (4,810 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1902 to September 1906 (published as "near Syracuse"), October 1920 to current year. Monthly discharge only for some periods published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 3,209.32 ft (978.201 m) above mean sea level. See WSP 1921 for history of changes prior to Nov. 15, 1956.

REMARKS.--Records fair. Flow moderately regulated by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--61 years, 331 ft³/s (9.374 m³/s), 239,800 acre-ft/yr (296 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 174,000 ft³/s (4,930 m³/s) June 17, 1965, gage height, 19.75 ft (6.020 m) from rating curve extended above 62,000 ft³/s (1,760 m³/s) on basis of indirect measurements; maximum gage height, 21.80 ft (6.645 m) June 17, 1965; no flow Aug. 17, 1946, and part of each day Sept. 26, 27, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1908 reached a stage of about 11.7 ft (3.57 m) from information by local newspaper, discharge, about 87,000 ft³/s (2,460 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,310 ft³/s (37.1 m³/s) May 25, gage height, 7.09 ft (2.161 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Oct. 11, 15, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	5.6	.59	2.0	4.8	7.2	9.2	23	108	6.7	21	33
2	1.4	6.0	.93	2.0	5.2	4.8	9.2	269	90	5.3	14	27
3	1.1	5.2	1.1	2.0	.93	5.2	8.6	170	78	3.8	11	22
4	1.1	4.0	1.1	1.4	5.6	5.6	9.2	114	69	3.2	17	18
5	.93	3.7	1.1	2.0	5.2	6.0	9.2	80	61	2.7	146	13
6	.93	3.1	1.1	2.0	9.6	6.4	9.2	66	56	2.6	151	9.2
7	2.6	2.3	1.4	1.7	6.0	5.6	7.2	56	48	2.3	130	5.0
8	1.7	1.4	1.7	1.1	7.6	5.6	6.0	48	44	2.0	58	3.7
9	.25	1.0	1.7	1.0	7.6	7.6	6.0	42	40	2.2	29	2.9
10	.25	3.1	2.3	1.0	6.8	8.4	4.8	39	39	2.0	13	2.7
11	.10	2.3	2.6	.90	6.0	10	3.4	37	36	.59	7.6	2.6
12	.25	1.7	2.6	.90	6.8	8.9	7.2	35	36	1.4	23	4.0
13	.20	.93	2.6	.90	6.4	7.5	72	33	32	1.0	125	15
14	.15	.68	2.0	1.0	6.0	7.4	88	75	28	.84	52	38
15	.10	4.0	2.0	2.0	7.6	7.6	115	81	26	1.0	39	24
16	.15	1.7	2.3	.84	6.8	7.2	129	50	23	.68	23	15
17	.20	2.6	2.6	1.1	6.4	7.7	167	40	20	.34	16	8.8
18	.34	2.8	2.6	.93	6.8	7.6	113	37	20	.76	8.3	4.6
19	.34	1.1	2.6	1.7	7.2	7.7	79	35	22	.76	10	3.0
20	.42	1.4	2.6	1.4	6.4	7.7	80	52	17	.59	25	2.3
21	.59	1.7	2.3	2.3	5.2	7.9	70	596	29	.34	176	1.6
22	.20	2.0	2.3	2.3	4.8	8.2	54	95	30	.68	219	1.4
23	.15	2.3	2.3	2.0	4.8	7.7	43	109	28	.76	254	1.3
24	.10	2.0	2.0	2.3	7.6	7.8	35	109	22	.76	317	1.2
25	.34	1.1	2.0	3.4	6.8	7.8	31	539	18	.76	303	1.1
26	.42	.93	2.0	3.7	4.8	8.4	33	303	19	.76	291	1.0
27	.68	1.0	4.4	4.8	6.4	8.0	31	129	14	.76	276	.97
28	1.0	.90	4.0	4.0	6.4	8.9	26	159	11	.76	199	.85
29	3.1	.90	3.0	2.8	---	9.2	27	221	8.1	13	98	.76
30	5.2	.84	2.3	2.8	---	9.3	25	345	7.0	25	68	.74
31	5.6	---	2.0	2.8	---	9.2	---	183	---	31	48	---
TOTAL	31.59	68.28	66.12	61.07	172.53	234.1	1307.2	4170	1079.1	115.34	3167.9	264.72
MEAN	1.02	2.28	2.13	1.97	6.16	7.55	43.6	135	36.0	3.72	102	8.82
MAX	5.6	6.0	4.4	4.8	9.6	10	167	596	108	31	317	38
MIN	.10	.68	.59	.84	.93	4.8	3.4	23	7.0	.34	7.6	.74
AC-FT	63	135	131	121	342	464	2590	8270	2140	229	6280	525

CAL YR 1976 TOTAL 8884.38 MEAN 24.3 MAX 784 MIN .10 AC-FT 17620
WTR YR 1977 TOTAL 10737.95 MEAN 29.4 MAX 596 MIN .10 AC-FT 21300

07138000 ARKANSAS RIVER AT SYRACUSE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT					
08...	1420	2.0	2800	52	.29
NOV					
03...	1530	7.3	3800	20	.40
DEC					
06...	1105	1.4	2900	13	.05
28...	1305	4.0	3300	38	.41
FEB					
04...	1040	8.0	3500	158	3.4
15...	1455	8.7	3500	82	1.9
APR					
13...	1600	125	3000	4300	1450
29...	1405	29	385	146	11
MAY					
02...	1120	456	590	6280	7730
02...	1610	218	950	4040	2380
05...	1340	218	2800	466	274
25...	1640	1300	560	7250	25400
JUN					
07...	1130	49	3700	328	43
21...	1520	31	2025	470	40
AUG					
04...	1130	5.9	3500	405	6.5
23...	1445	251	1230	8530	5780

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
APR								
13...	1600	125	4300	51	68	93	99	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
OCT										
20...	1230	3	0	1	14	48	70	92	100	--
MAY										
05...	1245	10	0	1	21	60	80	95	98	100

07138650 WHITEWOMAN CREEK NEAR LEOTI, KS

LOCATION.--Lat 38°28'52", long 101°29'16", in NW¼ sec.23, T.18 S., R.38 W., Wichita County, Hydrologic Unit 11030002, near center of span at downstream side of bridge on State Highway 96, 7 mi (11 km) west of Leoti, 0.8 mi (1.3 km) upstream from small right-bank tributary, and at mile 42.0 (67.6 km).

DRAINAGE AREA.--750 mi² (1,942 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,319.79 ft (1,011.872 m) above mean sea level. Prior to Oct. 1, 1976, water-stage recorder at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--11 years, 1.32 ft³/s (0.037 m³/s), 956 acre-ft/yr (1.18 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,600 ft³/s (159 m³/s) July 10, 1972, gage height, 18.10 ft (5.517 m), present datum; no flow most days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 698 ft³/s (19.8 m³/s) Aug. 6, gage height, 8.85 ft (2.697 m); no other peak above base of 300 ft³/s (8.50 m³/s); no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.5	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	242	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	28	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.4	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.1	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	11	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.4	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.4	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.08	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	24	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	9.5	.00	77	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	8.9	.00	30	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	20	.00	7.3	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	2.9	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	6.7	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.0	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	48.00	.00	142.80	309.88	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	1.55	.000	4.61	10.0	.000
MAX	.00	.00	.00	.00	.00	.00	.00	20	.00	77	242	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	95	.00	283	615	.00

CAL YR 1976 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT 0
WTR YR 1977 TOTAL 500.68 MEAN 1.37 MAX 242 MIN .00 AC-FT 993

07138650 WHITEWOMAN CREEK NEAR LEOTI, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY					
25...	1545	40	260	2810	303
25...	1620	40	958	26900	2910
26...	1120	8.1	162	1220	27
AUG					
11...	1325	4.5	180	288	3.5

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
MAY										
25...	1620	40	26900	63	76	82	94	96	98	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN 125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
MAY											
26...	1200	10	15	15	16	33	60	75	91	97	100

07139500 ARKANSAS RIVER AT DODGE CITY, KS

LOCATION.--Lat 37°44'51", long 100°01'08", in NE¼NE¼ sec.35, T.26 S., R.25 W., Ford County, Hydrologic Unit 11030003, on right bank, 30 ft (9 m) downstream from Second Street Bridge in Dodge City, at mile 970.2 (1,561.1 km).

DRAINAGE AREA.--30,600 mi² (79,254 km²), of which 5,583 mi² (14,460 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1902 to September 1906 (published as "near Dodge"), September 1944 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site at different datum 1909-1932 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: 1903(M), 1904, 1905(M), 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 2,464.71 ft (751.244 m) above mean sea level. Nov. 28, 1902, to Aug. 10, 1906, nonrecording gage at same site at datum about 8.00 ft (2.438 m) higher. Sept. 1 to Nov. 5, 1944, nonrecording gage and Nov. 6, 1944, to Sept. 30, 1975, recording gage both at present site and datum 3.00 ft (0.914 m) higher.

REMARKS.--Records poor. Flow moderately regulated since 1943 by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--37 years, 195 ft³/s (5.522 m³/s), 141,300 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82,000 ft³/s (2,320 m³/s) June 19, 1965, gage height, 15.68 ft (4.779 m); no flow at times in 1903, 1946, 1954, 1956, 1974-77.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 232 ft³/s (6.57 m³/s) Aug. 28, gage height, 4.17 ft (1.271 m), no peaks above base of 500 ft³/s (14.2 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	4.2	.48	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	3.4	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	2.3	.00	.00	.10	.00
4	.00	.00	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	1.4	.00	.00	2.2	.00
6	.00	.00	.00	.00	.00	.00	.00	1.1	.00	.36	4.3	.00
7	.00	.00	.00	.00	.00	.00	.00	1.0	.00	9.7	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	1.0	.00	2.4	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.90	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.90	2.7	.00	1.9	.00
12	.00	.00	.00	.00	.00	.00	.00	.50	3.3	.00	.00	.89
13	.00	.00	.00	.00	.00	.00	.00	.50	1.5	.00	.00	.07
14	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.45	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.38	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.15	.00	.00	11	.00
20	.00	.00	.00	.00	.00	.00	5.2	3.6	.06	.00	.01	.00
21	.00	.00	.00	.00	.00	.00	4.5	2.2	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	4.4	.90	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	4.0	.40	.00	.00	.00	.15
24	.00	.00	.00	.00	.00	.00	3.9	.96	.49	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	4.0	1.5	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	4.1	2.3	.00	3.4	.00	.00
27	.00	.00	.00	.00	.00	.00	4.2	1.5	.00	.00	.13	.00
28	.00	.00	.00	.00	.00	.00	4.0	.90	.00	.00	15	.00
29	.00	.00	.00	.00	---	.00	4.0	.94	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	3.5	.21	.00	.00	.69	.00
31	.00	---	.00	.00	---	.00	---	1.2	---	.00	.26	---
TOTAL	.00	.00	.00	.00	.00	.00	45.80	38.01	8.47	15.86	35.59	1.11
MEAN	.000	.000	.000	.000	.000	.000	1.53	1.23	.28	.51	1.15	.037
MAX	.00	.00	.00	.00	.00	.00	5.2	4.2	3.3	9.7	15	.89
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	91	75	17	31	71	2.2

CAL YR 1976 TOTAL 2505.77 MEAN 6.85 MAX 100 MIN .00 AC-FT 4970
WTR YR 1977 TOTAL 144.84 MEAN .40 MAX 15 MIN .00 AC-FT 287

07139500 ARKANSAS RIVER AT DODGE CITY, KS--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to 1977 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to June 1977 (discontinued).
WATER TEMPERATURES: October 1974 to September 1977 (discontinued).

REMARKS.--Many days of no flow during current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,770 micromhos Sept. 14, 1975; minimum, 256 micromhos May 20, 1977.
WATER TEMPERATURES: Maximum, 36.0°C July 20, 21, 1975; minimum, 0.0°C Dec. 8, 1974.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 3,850 micromhos was observed Feb. 7, 1974.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,580 micromhos Mar. 13; minimum daily, 574 micromhos Apr. 21.
WATER TEMPERATURES: Maximum daily, 31.5°C July 6; minimum daily, 14.0°C April 21.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
APR 20...	6.4	500	8.6	13.0	130	180	78	49	15	38	1.2	5.5
MAY 11...	1.0	1200	8.4	19.0	1	440	230	110	39	95	2.0	5.6

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
APR 20...	130	0	110	12	.7	9.8	322	.44	5.64	.95	.89	.16
MAY 11...	250	0	360	29	.9	9.3	794	1.08	2.14	.65	.59	.03

DATE	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL PHYTOPLANKTON (CELLS PER ML)
APR 20...	11.2	5300	50000	7.5	--
MAY 11...	15.2	330	240	--	2200

07139500 ARKANSAS RIVER AT DODGE CITY, KS--Continued
(National stream-quality accounting network station)

PHYTOPLANKTON ANALYSES (OCT.1976 - MAY.1977)

DATE	MAY 11.77
TIME	1030
TOTAL CELLS/ML	2200
DIVERSITY: DIVISION	1.1
.CLASS	1.1
..ORDER	1.1
...FAMILY	1.8
....GENUS	1.8

ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...SCENEDESMACEAE		
....SCENEDESMUS	16	1
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	65	3
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..PENNALES		
...ACHNANTHACEAE		
....ACHNANTHES	32	1
...FRAGILARIACEAE		
....SYNEDRA	65	3
...NAVICULACEAE		
....NAVICULA	320	14
...NITZSCHIACEAE		
....NITZSCHIA	1100#	50
CYANOPHYTA (BLUE-GREEN ALGAE)		
.MYXOPHYCEAE		
..OSCILLATORIALES		
...OSCILLATORIACEAE		
....OSCILLATORIA	610#	27

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07139500 ARKANSAS RIVER AT DODGE CITY, KS--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
APR								
20...	5	0	<10	4	<10	<10	0	<50

DATE	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)
APR									
20...	0	10	7	4800	40	100	11	30	160

DATE	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
APR								
20...	130	.0	4	1	3	40	10	30

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
APR					
20...	1405	6.4	1030	221	3.9

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAM-PLING POINTS	SUS-PENDED SEDI-MENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
APR											
20...	1405	10	221	0	2	17	50	69	91	98	100

07139500 ARKANSAS RIVER AT DODGE CITY, KS--Continued
(National stream-quality accounting network station)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								1060	1140			
2								1060	---			
3								1060	---			
4								810	---			
5								1010	---			
6								986	---			
7								1050	---			
8								1050	---			
9								1050	---			
10								1080	---			
11								1030	700			
12								1050	738			
13								1090	281			
14								1080	---			
15								---	---			
16								1140	---			
17								1100	---			
18								1050	473			
19								1110	---			
20								256	---			
21								946	---			
22								1050	---			
23								1000	---			
24								1030	600			
25								332	---			
26								975	---			
27								1020	---			
28								1040	---			
29								1050	---			
30								1090	---			
31								1020	---			
MEAN								989	655			

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	24.0	27.0	---	---	---
2							---	24.0	---	---	---	---
3							---	25.0	---	---	29.0	---
4							---	22.0	---	---	---	---
5							---	21.0	---	---	30.0	---
6							---	25.0	---	31.5	30.0	---
7							---	23.0	---	29.5	---	---
8							---	21.0	---	27.5	---	---
9							---	20.0	---	---	---	---
10							---	20.0	---	---	---	---
11							---	22.0	27.0	---	29.5	---
12							---	26.0	33.0	---	---	27.5
13							---	22.0	27.0	---	---	22.5
14							---	22.0	---	---	---	---
15							---	---	---	---	---	---
16							---	25.0	---	---	---	---
17							---	26.0	---	---	---	---
18							---	27.0	26.0	---	---	---
19							---	20.0	---	---	28.5	---
20							16.0	23.0	---	---	28.5	---
21							14.0	21.0	---	---	---	---
22							15.0	28.0	---	---	---	---
23							16.0	27.0	---	---	---	27.0
24							17.0	25.0	23.0	---	---	---
25							18.0	22.0	---	---	---	---
26							19.0	25.0	---	27.0	---	---
27							20.0	27.0	---	---	30.0	---
28							21.0	25.0	---	---	29.5	---
29							22.0	28.0	---	---	---	---
30							23.0	22.0	---	---	28.5	---
31							---	27.0	---	---	27.5	---

07139800 MULBERRY CREEK NEAR DODGE CITY, KS

LOCATION.--Lat 37°35'53", long 100°00'52", in NW¼ sec.24, T.28 S., R.25 W., Ford County, Hydrologic Unit 11030004, on right bank 75 ft (23 m) downstream from bridge on U.S. Highway 283, 9 mi (14 km) south of Dodge City, and 24 mi (39 km) above mouth.

DRAINAGE AREA.--73.8 mi² (191.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,509.96 ft (765.036 m) above mean sea level.

REMARKS.--Records fair. Low flow infrequently augmented by irrigation runoff.

AVERAGE DISCHARGE.--9 years, 1.15 ft³/s (0.033 m³/s), 833 acre-ft/yr (1.03 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,220 ft³/s (34.6 m³/s) Oct. 16, 1968, gage height, 11.35 ft (3.459 m); no flow for most days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time		Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Aug. 11	unknown		182	5.15	7.02	2.140
Aug. 19	1000	*	203	5.75	7.20	2.195

Minimum discharge, no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.05	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.37	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.33	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.37	25	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.44	62	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	24	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	64	.00
20	.00	.00	.00	.00	.00	.00	1.5	.00	.00	.00	8.5	.00
21	.00	.00	.00	.00	.00	.00	1.4	.00	.00	.00	.26	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.03	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	2.90	.00	.00	2.39	186.49	.00
MEAN	.000	.000	.000	.000	.000	.000	.097	.000	.000	.077	6.02	.000
MAX	.00	.00	.00	.00	.00	.00	1.5	.00	.00	.44	64	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	5.8	.00	.00	4.7	370	.00

CAL YR 1976 TOTAL 75.26 MEAN .21 MAX 16 MIN .00 AC-FT 149
WTR YR 1977 TOTAL 191.78 MEAN .53 MAX 64 MIN .00 AC-FT 380

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
AUG					
12...	1245	17	230	430	20

07140000 ARKANSAS RIVER NEAR KINSLEY, KS

LOCATION.--Lat 37°55'33", long 99°22'31", in SW¼SE¼ sec.26, T.24 S., R.19 W., Edwards County, Hydrologic Unit 11030004, on right bank at upstream side of bridge on U.S. Highway 50, 2.0 mi (3.0 km) east of Kinsley, and at mile 920.3 (1,480.8 km).

DRAINAGE AREA.--31,066 mi² (80,461 km²), of which 5,660 mi² (14,660 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,141.64 ft (652.772 km) above mean sea level. Prior to Nov. 10, 1944, nonrecording gage and Nov. 10, 1944 to Dec. 31, 1975 water-stage recorder, both at present site and datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good. Flow moderately regulated by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--33 years, 182 ft³/s (5.154 m³/s), 131,900 acre-ft/yr (163 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,800 ft³/s (1,410 m³/s) June 21, 1965, gage height, 14.60 ft (4.450 m); minimum, no flow July 28, Aug. 9, 11, 1977, result of sand pit operation 0.5 mile (0.80 km) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 494 ft³/s (14.0 m³/s) May 24, gage height, 7.01 ft (2.137), no peak above base of 500 ft³/s (14.2 m³/s); no flow July 28, Aug. 9, 11, result of sand pit operation 0.5 mile (0.80 km) upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	4.7	7.3	9.0	15	11	8.1	13	50	12	7.3	32
2	7.7	5.1	8.0	8.5	18	12	8.4	15	45	12	8.3	28
3	7.9	5.1	8.5	7.8	18	12	8.6	15	40	11	7.9	26
4	7.7	4.8	12	8.2	18	11	10	14	36	9.8	6.6	25
5	8.8	4.8	12	9.0	17	11	9.8	16	33	9.2	6.3	23
6	8.2	4.9	11	9.8	20	12	9.2	27	30	8.4	6.6	22
7	8.1	5.1	9.9	9.4	17	11	9.3	25	28	8.4	5.8	21
8	8.1	4.8	9.3	8.5	18	12	9.2	22	27	9.6	5.1	20
9	7.6	4.8	11	7.5	20	11	8.2	23	25	14	4.4	18
10	7.5	4.8	13	8.7	19	11	8.1	19	23	43	4.0	17
11	6.4	4.8	10	7.5	17	11	7.1	18	21	32	6.4	17
12	6.4	4.8	11	6.9	16	11	6.8	16	23	23	6.4	17
13	6.0	4.5	13	6.9	17	11	6.5	15	22	18	5.9	26
14	5.7	4.5	14	7.5	16	11	6.8	13	20	15	5.5	23
15	5.4	4.6	15	7.8	17	11	7.1	13	21	13	5.9	22
16	5.2	4.8	14	6.6	17	11	6.7	11	20	11	5.5	21
17	4.9	5.1	12	7.8	18	11	6.8	11	18	9.1	5.3	20
18	5.1	5.3	11	10	16	11	7.2	11	17	8.0	5.1	18
19	5.1	5.7	11	9.0	15	9.8	7.6	10	17	7.3	5.6	17
20	4.8	6.0	10	9.0	15	9.6	8.8	10	16	6.6	5.6	16
21	4.8	6.4	8.5	9.4	15	9.9	9.7	14	16	5.7	20	15
22	5.0	5.8	8.5	9.8	14	9.4	14	13	15	7.3	97	14
23	5.0	6.1	8.1	11	15	8.9	17	13	15	6.0	71	14
24	4.9	6.1	9.8	12	14	8.5	16	279	15	5.6	52	13
25	4.7	6.0	11	12	13	9.4	15	151	17	5.1	41	12
26	4.7	6.2	11	13	13	9.1	14	107	19	5.4	32	11
27	4.8	6.3	13	15	13	9.1	13	117	16	6.9	27	9.7
28	4.6	5.9	14	15	12	11	12	115	15	8.2	33	9.3
29	4.6	5.7	12	12	---	9.4	11	84	14	8.3	35	10
30	4.6	5.7	14	13	---	8.3	13	68	13	8.4	40	11
31	4.5	---	9.6	13	---	7.8	---	58	---	7.5	37	---
TOTAL	187.7	159.2	342.5	300.6	453	322.2	295.0	1336	687	354.8	604.5	548.0
MEAN	6.05	5.31	11.0	9.70	16.2	10.4	9.83	43.1	22.9	11.4	19.5	18.3
MAX	8.8	6.4	15	15	20	12	17	279	50	43	97	32
MIN	4.5	4.5	7.3	6.6	12	7.8	6.5	10	13	5.1	4.0	9.3
AC-FT	372	316	679	596	899	639	585	2650	1360	704	1200	1090

CAL YR 1976 TOTAL 9303.9 MEAN 25.4 MAX 125 MIN 2.0 AC-FT 18450
WTR YR 1977 TOTAL 5590.5 MEAN 15.3 MAX 279 MIN 4.0 AC-FT 11090

07140000 ARKANSAS RIVER NEAR KINSLEY, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1960 to September 1967, October 1968 to September 1969, November 1974 to September 1975.
SUSPENDED-SEDIMENT DISCHARGE: October 1960 to September 1975.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT 04...	1435	7.9	1060	165	3.5
NOV 01...	1430	4.4	1190	12	.14
DEC 08...	1355	10	1130	13	.36
JAN 05...	1355	10	1320	6	.16
FEB 01...	1415	14	1090	13	.49
MAR 04...	0930	11	2000	17	.51
MAY 24...	1340	343	280	976	904

07140700 GUZZLERS GULCH NEAR NESS CITY, KS

LOCATION.--Lat 38°17'40", long 99°57'10", in SW¼SW¼ sec.23, T.20 S., R.24 W., Ness County, Hydrologic Unit 11030005, on right bank, 30 ft (9 m) downstream from highway bridge, 5 mi (8 km) upstream from mouth, and 11 mi (18 km) southwest of Ness City.

DRAINAGE AREA.--58.2 mi² (150.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,240 ft (683 m); from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--16 years (1962-77), 2.13 ft³/s (0.060 m³/s), 1,540 acre-ft/yr (1.90 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,050 ft³/s (86.4 m³/s) July 29, 1971, gage height, 14.29 ft (4.356 m); from rating curve extended above 1,900 ft³/s (53.8 m³/s); no flow most days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 236 ft³/s (6.68 m³/s) Aug. 5, gage height, 6.48 ft (1.975 m); no other peaks above base of 75 ft³/s (2.12 m³/s); no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.8	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	120	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	42	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	19	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.8	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	15	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	46	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	26	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	13	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.3	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.25	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.31	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.71	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.27	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.31	.00	1.18	.00	303.67	.00
MEAN	.000	.000	.000	.000	.000	.000	.010	.000	.039	.000	9.80	.000
MAX	.00	.00	.00	.00	.00	.00	.31	.00	.71	.00	120	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.6	.00	2.3	.00	602	.00

CAL YR 1976 TOTAL 66.95 MEAN .18 MAX 39 MIN .00 AC-FT 133
WTR YR 1977 TOTAL 305.16 MEAN .84 MAX 120 MIN .00 AC-FT 605

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR					
21...	1640	1.6	200	814	3.5
AUG					
06...	1720	91	265	2480	609
11...	1350	6.5	255	361	6.4

07141200 PAWNEE RIVER NEAR LARNED, KS

LOCATION.--Lat 38°12'00", long 99°20'50", in NW¼NW¼ sec.30, T.21 S., R.18 W., Pawnee County, Hydrologic Unit 11030005, on right bank, 0.8 mi (1.3 km) north of U.S. Highway 156, 14 mi (23 km) west of Larned, and at mile 24.8 (39.9 km).

DRAINAGE AREA.--2,148 mi² (5,563 km²), of which 138 mi² (357 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to September 1924 (gage heights and discharge measurements only), October 1924 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1177: 1949. WSP 1241: 1927-28(M), 1935, 1940, 1943. WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Concrete control since June 2, 1959. Datum of gage is 2,040.90 ft (622.066 m) above mean sea level. See WSP 1921 for history of changes prior to June 2, 1959.

REMARKS.--Records fair. Diversions for irrigation above station.

AVERAGE DISCHARGE.--53 years, 73.7 ft³/s (2.087 m³/s), 53,400 acre-ft/yr (65.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft³/s (462 m³/s) July 28, 1958, gage height, 28.22 ft (8.601 m); site and datum then in use, or 22.9 ft (6.98 m), present site and datum; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) Aug. 14, gage height, 7.12 ft (2.170 m); no other peak above base of 900 ft³/s (25.5 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1	367
2	3.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.91	228
3	1.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.45	155
4	.46	.00	.00	.00	.00	.00	.00	23	.00	.00	.18	78
5	.28	.00	.00	.00	.00	.00	.00	12	.00	.00	.06	43
6	.00	.00	.00	.00	.00	.00	.00	5.7	.00	.00	23	30
7	.00	.00	.00	.00	.00	.00	.00	2.4	.00	.00	105	23
8	.00	.00	.00	.00	.00	.00	.00	.84	.00	.00	205	16
9	.00	.00	.00	.00	.00	.00	.00	.40	.00	.00	235	12
10	.00	.00	.00	.00	.00	.00	.00	.28	.00	.00	156	8.0
11	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	169	6.0
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	914	4.0
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	958	3.0
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1020	1.9
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	256	1.0
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	74	.48
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	44	.16
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	51	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	42	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	28	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	27	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	116	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	88	.00
25	.00	.00	.00	.0	.00	.00	.00	.00	.00	34	56	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.13	15	32	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	1.9	7.1	16	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	1.4	7.1	244	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.39	14	213	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.06	3.0	212	.00
31	.00	---	.00	.00	---	.00	---	.00	---	1.4	294	---
TOTAL	11.74	.00	.00	.00	.00	.00	.00	44.72	3.88	93.60	5597.70	976.54
MEAN	.38	.000	.000	.000	.000	.000	.000	1.44	.13	3.02	181	32.6
MAX	6.8	.00	.00	.00	.00	.00	.00	23	1.9	34	1020	367
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00
AC-FT	23	.00	.00	.00	.00	.00	.00	89	7.7	186	11100	1940

CAL YR 1976 TOTAL 6013.69 MEAN 16.4 MAX 999 MIN .00 AC-FT 11930
WTR YR 1977 TOTAL 6728.18 MEAN 18.4 MAX 1020 MIN .00 AC-FT 13350

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
OCT					
04...	1540	.40	470	835	.90
MAY					
10...	1340	.28	240	328	.25
JUN					
28...	1105	1.1	215	148	.46
AUG					
12...	1705	978	260	2940	7760

07141300 ARKANSAS RIVER AT GREAT BEND, KS

LOCATION.--Lat 38°21'11", long 98°45'50", in SW¼NW¼SE¼ sec.33, T.19 S., R.13 W., Barton County, Hydrologic Unit 11030004, at downstream side of bridge on U.S. Highway 281, 0.5 mi (0.8 km) south of Great Bend, 4.5 mi (7.2 km) upstream from Walnut Creek, and at mile 873.2 (1,405.0 km).

DRAINAGE AREA.--34,356 mi² (88,982 km²), of which 6,002 mi² (15,545 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1940 to current year. Fragmentary gage-height records collected at same site, at datum 3.0 ft (0.9 m) higher, 1906, 1908-12, are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,835.19 ft (560.777 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1975 at datum 4.00 ft higher.

REMARKS.--Records fair. Flow moderately regulated since 1943 by John Martin Reservoir (see sta 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation and to Cheyenne Bottoms State Waterfowl Refuge, and return flow from irrigated areas.

AVERAGE DISCHARGE.--37 years, 355 ft³/s (10.05 m³/s), 257,200 acre-ft/yr (317 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,800 ft³/s (787 m³/s) June 23, 1965, gage height, 13.10 ft (3.993 m); maximum gage height, 13.18 ft (4.017 m) June 23, 1965; no flow at times in 1940, 1946, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to June 23, 1965, and since at least 1895, about 11.7 ft (3.57 m) in June 1921, from reports of U.S. Weather Bureau (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 715 ft³/s (20.2 m³/s) Aug. 15, 16, gage height, 7.51 ft (2.289 m); no peak above base of 1,300 ft³/s (36.8 m³/s); minimum, 1.1 ft³/s (0.031 m³/s) Mar. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	9.8	7.3	6.0	7.5	5.3	4.0	4.2	94	32	12	201
2	58	9.1	7.1	6.0	7.7	6.2	3.9	21	87	31	18	222
3	44	9.1	7.1	7.0	7.8	5.7	4.1	16	80	29	19	222
4	37	8.9	6.4	7.0	8.2	5.6	4.7	13	71	27	16	166
5	31	8.9	4.8	7.0	8.3	5.3	4.3	12	64	22	12	125
6	25	8.9	7.1	7.0	8.9	5.0	4.2	11	55	25	15	86
7	22	9.2	6.1	7.0	9.6	5.0	4.3	11	31	27	12	60
8	20	9.8	7.7	7.0	9.5	4.9	4.3	11	37	23	11	44
9	18	8.9	6.9	6.0	9.6	4.8	3.2	11	39	28	9.9	30
10	16	8.6	6.8	6.0	9.4	5.2	3.9	26	22	28	9.3	22
11	15	8.5	6.1	6.0	8.5	5.4	3.8	105	19	30	11	19
12	14	8.5	6.5	6.0	8.3	4.9	3.7	65	17	49	10	17
13	13	8.6	7.0	6.0	8.0	4.8	3.9	27	23	33	13	16
14	13	8.6	6.2	6.0	7.7	3.7	3.8	20	17	29	265	15
15	12	8.8	7.1	6.0	7.7	4.6	3.7	19	15	23	618	13
16	12	8.5	7.4	6.0	7.7	4.6	3.7	17	14	21	568	13
17	11	8.4	7.4	6.0	7.7	4.4	4.0	16	14	20	231	12
18	11	7.9	6.1	6.0	7.6	4.2	4.0	15	14	16	130	12
19	11	7.4	7.5	6.0	7.4	4.1	3.8	14	18	13	82	11
20	10	7.2	7.6	6.2	7.1	4.2	4.3	16	16	13	53	11
21	10	7.4	7.5	7.9	6.8	4.1	4.5	20	16	13	38	9.9
22	10	7.2	7.4	8.3	6.5	3.4	4.9	15	23	14	28	9.8
23	10	6.8	7.4	8.6	5.6	2.5	4.4	14	18	11	23	10
24	10	6.8	6.5	8.6	6.2	4.0	4.2	13	20	10	20	9.8
25	9.8	6.8	7.1	8.4	6.1	4.1	4.0	13	36	11	20	9.8
26	11	6.9	7.3	7.4	6.2	3.9	4.0	12	40	11	24	9.8
27	12	7.8	5.8	7.0	5.9	3.9	4.0	16	38	17	20	9.8
28	11	6.9	7.5	6.0	5.9	5.1	4.0	23	36	18	29	10
29	11	7.2	7.7	6.0	---	4.3	4.1	36	33	14	49	10
30	11	7.2	7.1	6.0	---	4.1	4.2	107	33	13	186	9.4
31	9.9	---	7.7	7.0	---	4.0	---	106	---	12	227	---
TOTAL	588.7	243.8	215.2	207.4	213.4	141.3	121.9	824.2	1039	660	2757.2	1415.3
MEAN	19.0	8.13	6.94	6.69	7.62	4.56	4.06	26.6	34.6	21.3	88.9	47.2
MAX	80	9.8	7.7	8.6	9.6	6.2	4.9	107	94	49	618	222
MIN	9.8	6.8	4.8	6.0	5.6	2.5	3.2	4.2	14	10	9.3	9.4
AC-FT	1170	484	427	411	423	280	242	1630	2060	1310	5470	2810

CAL YR 1976 TOTAL 17068.8 MEAN 46.6 MAX 2310 MIN 2.3 AC-FT 33860
WTR YR 1977 TOTAL 8427.4 MEAN 23.1 MAX 618 MIN 2.5 AC-FT 16720

07141780 WALNUT CREEK NEAR RUSH CENTER, KS

LOCATION.--Lat 38°28'07", long 99°22'07", in NE¼SW¼SE¼ sec.24, T.18 S., R.19 W., Rush County, Hydrologic Unit 11030008, on left bank at downstream side of bridge on State Highway 96, 3.0 mi (4.8 km) west of Rush Center.

DRAINAGE AREA.--1,256 mi² (3,253 km²), of which 104 mi² (269 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,983.99 ft (604.720 m) above mean sea level.

REMARKS.--Records good. Occasional low flow diversions for irrigation.

AVERAGE DISCHARGE.--8 years, 25.9 ft³/s (0.733 m³/s), 18,760 acre-ft/yr (23.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,020 ft³/s (142 m³/s) June 14, 1970, gage height, 24.89 ft (7.586 m); no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 214 ft³/s (6.06 m³/s) Aug. 7, gage height, 9.03 ft (2.752 m); no peak above base of 1,000 ft³/s (28.3 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.00	.00	.00	.00	.70	.00	.95	.00	.00	.00	1.8
2	.47	.00	.00	.00	.00	.52	.00	1.2	.00	.00	.00	1.4
3	.46	.00	.00	.00	.00	.32	.00	.98	.00	.00	.00	1.1
4	.41	.00	.00	.00	.00	.18	.00	.55	.00	.00	.00	.64
5	.36	.00	.00	.00	.00	.13	.00	.22	.00	.00	.00	.52
6	.28	.00	.00	.00	.00	.12	.00	.07	.00	.00	3.7	.46
7	.34	.00	.00	.00	.00	.09	.00	.02	.00	.00	111	.43
8	.19	.00	.00	.00	.00	.07	.00	.03	.00	.00	135	.40
9	.19	.00	.00	.00	.00	.02	.00	.04	.00	.00	58	.33
10	.20	.00	.00	.00	.00	.00	.00	.05	.00	.00	25	.20
11	.22	.00	.00	.00	.00	.00	.00	5.4	.00	.00	25	.11
12	.19	.00	.00	.00	.42	.00	.00	35	.00	.00	19	.08
13	.22	.00	.00	.00	.72	.00	.00	15	.00	.00	4.7	.03
14	.22	.00	.00	.00	1.1	.00	.00	6.4	.00	.00	4.5	.01
15	.21	.00	.00	.00	1.1	.00	.00	2.6	.00	.00	2.8	.00
16	.15	.00	.00	.00	1.2	.00	.00	1.9	.00	.00	2.2	.00
17	.05	.00	.00	.00	1.3	.00	.00	1.6	.00	.00	1.9	.00
18	.03	.00	.00	.00	1.2	.00	.00	1.3	.00	.00	13	.00
19	.01	.00	.00	.00	1.3	.00	.00	.77	.00	.00	9.5	.00
20	.00	.00	.00	.00	1.2	.00	.00	.53	.00	.00	5.1	.00
21	.00	.00	.00	.00	1.4	.00	.00	.55	.00	.00	2.8	.00
22	.00	.00	.00	.00	1.4	.00	.00	.49	.00	.00	2.3	.00
23	.00	.00	.00	.00	1.5	.00	.00	.38	.00	.00	2.1	.00
24	.00	.00	.00	.00	1.5	.01	.00	.19	.00	.00	1.9	.00
25	.00	.00	.00	.00	1.4	.00	.00	.08	.00	.00	5.7	.00
26	.00	.00	.00	.00	1.2	.00	.00	.05	.00	.00	52	.00
27	.00	.00	.00	.00	1.1	.00	.00	.06	.00	.00	7.6	.00
28	.00	.00	.00	.00	.92	.00	.00	.09	.00	.00	63	.00
29	.00	.00	.00	.00	---	.00	1.6	.07	.00	.00	41	.00
30	.00	.00	.00	.00	---	.00	1.6	.04	.00	.00	6.9	.00
31	.00	---	.00	.00	---	.00	---	.01	---	.00	2.4	---
TOTAL	5.30	.00	.00	.00	19.96	2.16	3.20	76.62	.00	.00	608.10	7.51
MEAN	.17	.000	.000	.000	.71	.070	.11	2.47	.000	.000	19.6	.25
MAX	1.1	.00	.00	.00	1.5	.70	1.6	35	.00	.00	135	1.8
MIN	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
AC-FT	11	.00	.00	.00	40	4.3	6.3	152	.00	.00	1210	15

CAL YR 1976 TOTAL 3735.88 MEAN 10.2 MAX 698 MIN .00 AC-FT 7410
WTR YR 1977 TOTAL 722.85 MEAN 1.98 MAX 135 MIN .00 AC-FT 1430

07141900 WALNUT CREEK AT ALBERT, KS

LOCATION.--Lat 38°27'40", long 99°00'50 , in SW¼NW¼NW¼ sec.29, T.18 S., R.15 W., Barton County, Hydrologic Unit 11030008, at downstream side of highway bridge, 0.2 mi (0.3 km) north of Albert, 14 mi (22.5 km) northwest of Great Bend, and at mile 43.0 (69.2 km).

DRAINAGE AREA.--1,410 mi² (3,652 km²), approximately, of which 104 mi² (269 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,897.37 ft (578.318 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records fair.

AVERAGE DISCHARGE.--19 years, 60.7 ft³/s (1.719 m³/s), 43,980 acre-ft/yr (54.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s (360 m³/s) Sept. 22, 1959, gage height, 25.75 ft (7.849 m); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to July 1958 and since at least 1908, 21.3 ft (6.49 m) in August 1927, from floodmark and information by local residents (discharge not determined, but due to levees built in 1934 is substantially greater than indicated by current rating).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 308 ft³/s (8.72 m³/s) May 29, 31, gage height, 8.98 ft (2.737 m), no peak above base of 1,000 ft³/s (28.3 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	.01	.00	.00	.02	.00	.00	.01	42	.56	.12	14
2	7.2	.00	.00	.00	.02	.00	.00	.08	21	.42	1.0	5.0
3	5.0	.00	.00	.00	.02	.00	.00	.06	8.9	.22	.75	2.5
4	3.7	.00	.00	.00	.02	.00	.01	.04	5.0	.48	1.2	1.6
5	2.9	.00	.00	.00	.03	.00	.02	.01	3.9	.39	1.5	1.0
6	2.4	.00	.00	.00	.03	.00	.01	.00	2.6	.24	3.3	.70
7	2.2	.00	.00	.00	.03	.00	.00	.00	1.0	.30	2.2	.51
8	1.7	.00	.00	.00	.04	.00	.00	.00	1.6	.18	1.3	.39
9	1.4	.00	.00	.00	.06	.00	.00	107	1.5	.19	124	.33
10	1.0	.00	.00	.00	.08	.00	.00	35	1.0	.22	87	.26
11	.70	.00	.00	.00	.10	.00	.00	7.4	.95	.18	38	.24
12	.75	.00	.00	.00	.11	.00	.00	2.8	.95	.16	22	.22
13	.48	.00	.00	.00	.11	.00	.00	1.4	4.0	.65	16	.19
14	.30	.00	.00	.00	.11	.00	.00	.75	2.9	.23	12	.17
15	.26	.00	.00	.00	.06	.00	.00	.70	.95	.16	8.0	.13
16	.23	.00	.00	.00	.02	.00	.00	.39	.70	.17	5.2	.09
17	.21	.00	.00	.00	.00	.00	.00	.42	1.7	.15	5.5	.06
18	.21	.00	.00	.00	.00	.00	.00	.48	1.9	.23	4.3	.04
19	.22	.00	.00	.00	.00	.00	.00	.26	1.6	.28	3.2	.02
20	.22	.00	.00	.00	.00	.00	.04	.31	1.6	.18	2.0	.00
21	.21	.00	.00	.00	.00	.00	.06	2.8	1.9	.13	1.3	.00
22	.20	.00	.00	.00	.00	.00	.09	3.2	2.1	.11	1.0	.00
23	.20	.00	.00	.00	.00	.00	.07	3.7	1.3	.09	2.6	.00
24	.15	.00	.00	.00	.00	.00	.04	3.5	1.6	.08	2.3	.00
25	.18	.00	.00	.00	.00	.00	.03	3.2	4.2	.09	1.9	.00
26	.12	.00	.00	.00	.00	.00	.03	3.0	3.3	.15	1.2	.00
27	.12	.00	.00	.00	.00	.00	.01	3.0	1.3	.27	5.7	.00
28	.12	.00	.00	.00	.00	.01	.01	4.6	1.2	. 7	51	.00
29	.10	.00	.00	.01	---	.01	.01	66	.89	.21	34	.00
30	.08	.00	.00	.01	---	.00	.01	192	.42	.19	83	.00
31	.04	---	.00	.02	---	.00	---	202	---	.13	32	---
TOTAL	46.60	.01	.00	.04	.86	.02	.44	644.11	124.16	7.38	554.57	27.45
MEAN	1.50	.000	.000	.001	.031	.001	.015	20.8	4.14	.24	17.9	.92
MAX	14	.01	.00	.02	.11	.01	.09	202	42	.65	124	14
MIN	.04	.00	.00	.00	.00	.00	.00	.00	.42	.08	.12	.00
AC-FT	92	.02	.00	.08	1.7	.04	.9	1280	246	15	1100	54

CAL YR 1976 TOTAL 7121.81 MEAN 19.5 MAX 1220 MIN .00 AC-FT 14130
WTR YR 1977 TOTAL 1405.64 MEAN 3.85 MAX 202 MIN .00 AC-FT 2790

07141900 WALNUT CREEK AT ALBERT, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1962 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1963 to September 1969, October 1970 to September 1975.
SUSPENDED-SEDIMENT DISCHARGE: October 1963 to September 1975.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SUS- PENDED SEDI- MENT (MG/L)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY)
AUG					
17...	1450	5.7	440	371	5.8

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAM- PLING POINTS	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
MAY											
05...	0845	300	20	20	21	26	42	61	87	97	100

07142015 WALNUT CREEK NEAR HEIZER, KS

LOCATION.--Lat 38°25'11", long 98°50'49", in SW¼SW¼SW¼ sec.2, T.19 S., R.14 W., Barton County, Hydrologic Unit 11030008, at upstream side of county highway bridge, 2.2 mi (3.5 km) east of Heizer, 4.0 mi (6.4 km) northwest of Great Bend, and at mile 24.7 (39.7 km).

DRAINAGE AREA.--1,490 mi² (3,859 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1974 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 1,855 ft (565 m); from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,430 ft³/s (40.5 m³/s) June 27, 1975, gage height, 22.14 ft (6.748 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 249 ft³/s (7.05 m³/s) June 1, gage height, 13.35 ft (4.069 m), no peak above base of 1,000 ft³/s (28.3 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	.06	.00	.00	.00	.14	.00	.00	192	4.8	.00	41
2	15	.05	.00	.00	.00	.13	.00	.50	70	1.3	.00	20
3	7.2	.03	.00	.00	.00	.13	.00	98	37	.84	.00	10
4	4.2	.02	.00	.00	.00	.12	.00	56	22	.68	.00	5.2
5	2.9	.01	.00	.00	.00	.10	.00	21	15	.50	.00	2.6
6	1.8	.00	.00	.00	.00	.09	.00	12	10	.43	.03	1.3
7	1.1	.00	.00	.00	.00	.08	.00	8.2	7.9	.40	.00	.80
8	.87	.00	.00	.00	.00	.06	.00	5.4	5.3	.28	.00	.50
9	.57	.00	.00	.00	.00	.05	.00	11	3.4	4.9	.00	.36
10	.43	.00	.00	.00	.00	.03	.00	168	1.9	135	60	.30
11	.32	.00	.00	.00	.01	.02	.00	84	1.2	44	71	.24
12	.22	.00	.00	.00	.11	.00	.00	34	.94	16	42	.23
13	.16	.00	.00	.00	.19	.00	.00	20	9.4	9.2	27	.25
14	.13	.00	.00	.00	.28	.00	.00	14	31	5.5	19	.19
15	.09	.00	.00	.00	.39	.00	.00	10	44	.74	17	.12
16	.06	.00	.00	.00	.45	.00	.00	8.4	15	.26	17	.09
17	.03	.00	.00	.00	.47	.00	.00	6.7	6.5	.13	14	.06
18	.01	.00	.00	.00	.46	.00	.00	4.7	2.7	.08	8.8	.03
19	.00	.00	.00	.00	.40	.00	.00	3.7	2.6	.05	6.1	.00
20	.00	.00	.00	.00	.37	.00	.00	3.5	2.9	.03	4.2	.00
21	.00	.00	.00	.00	.34	.00	.00	7.7	8.0	.00	2.9	.00
22	.00	.00	.00	.00	.30	.00	.00	8.2	19	.00	2.2	.00
23	.00	.00	.00	.00	.26	.00	.00	6.6	44	.00	1.8	.00
24	.00	.00	.00	.00	.25	.00	.00	4.9	32	.00	2.5	.00
25	.00	.00	.00	.00	.22	.00	.00	4.0	23	.01	5.5	.00
26	.00	.00	.00	.00	.20	.00	.00	3.1	21	.01	3.6	.00
27	.00	.00	.00	.00	.18	.00	.00	2.9	13	.00	1.8	.00
28	.00	.00	.00	.00	.16	.00	.00	12	8.4	.00	3.4	.00
29	.00	.00	.00	.00	---	.00	.00	37	3.4	.00	136	.00
30	.03	.00	.00	.00	---	.00	.00	133	6.4	.00	83	.00
31	.05	---	.00	.00	---	.00	---	213	---	.00	73	---
TOTAL	60.17	.17	.00	.00	5.04	.95	.00	1003.50	658.94	225.14	601.83	83.27
MEAN	1.94	.006	.000	.000	.18	.031	.000	32.4	22.0	7.26	19.4	2.78
MAX	25	.06	.00	.00	.47	.14	.00	213	192	135	136	41
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.94	.00	.00	.00
AC-FT	119	.3	.00	.00	10.0	1.9	.00	1990	1310	447	1190	165

CAL YR 1976 TOTAL 4957.81 MEAN 13.5 MAX 643 MIN .00 AC-FT 9830
WTR YR 1977 TOTAL 2639.01 MEAN 7.23 MAX 213 MIN .00 AC-FT 5230

07142300 RATTLESNAKE CREEK NEAR MACKSVILLE, KS

LOCATION.--Lat 37°52'20", long 98°52'30", in SW¼SW¼ sec.16, T.25 S., R.14 W., Stafford County, Hydrologic Unit 11030009, at downstream side of highway bridge, 8 mi (13 km) southeast of Macksville, and 87.5 mi (140.8 km) upstream from mouth.

DRAINAGE AREA.--784 mi² (2,030 km²), of which about 428 mi² (1,110 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,963.46 ft (598.463 m), from Stafford County bench mark. Prior to July 14, 1960, nonrecording gage and crest-stage gages at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--18 years, 37.0 ft³/s (1.048 m³/s), 26,810 acre-ft/yr (33.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,700 ft³/s (501 m³/s) Sept. 26, 1973, gage height, 11.02 ft (3.359 m); minimum, 0.10 ft³/s (0.022 m³/s) Sept. 20, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 24	1800	* 3,220	91.2	9.71	2.960	June 14	1500	294	8.33	7.13	2.173
May 29	0300	626	17.7	8.50	2.591	June 25	0100	545	15.4	8.33	2.539

Minimum discharge, 7.1 ft³/s (0.20 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	23	26	23	25	25	25	21	89	40	13	17
2	20	22	25	22	24	25	24	21	73	35	14	16
3	20	22	25	21	24	26	24	22	62	32	12	16
4	20	23	26	21	25	26	25	22	55	28	12	16
5	20	22	26	21	24	26	26	21	51	26	12	16
6	20	22	26	21	24	26	25	21	49	24	12	16
7	20	23	25	21	24	26	24	21	47	23	10	15
8	20	23	26	21	24	26	23	20	44	23	9.0	15
9	20	24	25	21	24	26	22	19	43	40	8.5	14
10	20	23	26	21	24	26	21	26	41	34	9.3	13
11	18	23	26	21	25	27	20	22	39	28	24	13
12	17	23	26	21	25	27	21	27	49	29	21	14
13	17	23	26	21	25	27	22	33	61	26	18	17
14	17	23	26	21	26	27	22	25	214	21	17	22
15	19	23	26	21	26	26	22	21	142	20	17	22
16	19	24	26	22	25	25	22	20	55	0	17	28
17	19	24	26	22	26	25	24	19	45	17	17	23
18	20	24	26	22	25	25	24	19	42	14	16	19
19	20	24	26	22	25	25	24	18	40	13	16	17
20	20	24	26	23	25	25	25	20	40	14	16	17
21	21	24	25	24	25	25	26	34	40	16	17	16
22	20	24	26	24	25	25	28	34	41	16	16	16
23	21	24	26	25	25	25	27	28	39	15	17	16
24	22	24	27	26	24	25	26	1210	93	14	16	15
25	21	24	27	27	25	24	25	1130	382	11	15	15
26	23	24	27	28	25	24	23	500	162	11	15	14
27	24	24	27	28	25	24	23	309	96	14	13	14
28	24	24	27	25	25	26	24	194	91	18	18	14
29	24	24	26	24	---	26	22	484	63	18	20	15
30	24	25	25	26	---	26	21	277	45	16	18	16
31	24	---	24	26	---	25	---	141	---	15	17	---
TOTAL	635	703	803	712	694	792	710	4779	2333	671	472.8	497
MEAN	20.5	23.4	25.9	23.0	24.8	25.5	23.7	154	77.8	21.6	15.3	16.6
MAX	24	25	27	28	26	27	28	1210	382	40	24	28
MIN	17	22	24	21	24	24	20	18	39	11	8.5	13
AC-FT	1260	1390	1590	1410	1380	1570	1410	9480	4630	1330	938	986

CAL YR 1976 TOTAL 13438.0 MEAN 36.7 MAX 463 MIN 15 AC-FT 26650
WTR YR 1977 TOTAL 13801.8 MEAN 37.8 MAX 1210 MIN 8.5 AC-FT 27380

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
JUN 29...	1230	57	260	766	118

07142575 RATTLESNAKE CREEK NEAR ZENITH, KS

LOCATION.--Lat 38°06'01", long 98°30'32", in SW¼SW¼SW¼ sec.26, T.22 S., R.11 W., Stafford County, Hydrologic Unit 11030009, at downstream side of highway bridge, 1.1 mi (1.8 km) upstream from Little Salt Marsh, 10.0 mi (16.1 km) north of Zenith, and at mile 19.3 (31.1 km).

DRAINAGE AREA.--1,052 mi² (2,725 km²), of which 519 mi² (1,344 km²) are noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,785 ft (544 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft³/s (515 m³/s) Sept. 26, 1973, gage height, 9.95 ft (3.033 m); minimum, 18 ft³/s (0.51 m³/s) Aug. 13, 14, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar. 11	1800	133	3.77	4.14	1.262	June 23	1200	323	9.15	5.21	1.588
May 28	0600	* 1,180	33.4	7.28	2.219	June 28	0600	416	11.8	5.52	1.682
May 31	2400	626	17.7	6.19	1.887	Sept. 13	1600	252	7.14	4.92	1.500
June 17	2400	150	4.25	4.28	1.305						

Minimum discharge, 20 ft³/s (0.57 m³/s) Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	66	58	44	45	42	53	53	549	122	32	38
2	33	54	62	42	46	44	53	67	327	93	33	33
3	32	48	64	38	48	44	52	62	192	78	40	31
4	30	45	66	37	48	44	60	55	133	67	33	30
5	29	43	68	36	50	44	66	52	100	60	31	30
6	30	42	68	35	51	43	64	49	84	56	30	29
7	31	41	66	33	51	43	59	49	72	55	28	28
8	32	41	66	32	52	42	56	48	63	50	26	26
9	31	41	64	32	52	41	53	46	55	48	24	26
10	30	41	64	31	54	44	50	44	48	46	24	24
11	30	41	62	31	54	90	48	43	44	46	30	26
12	28	42	62	31	54	97	48	43	44	49	41	27
13	30	40	63	31	53	69	48	44	55	43	42	176
14	28	38	65	32	51	61	48	42	92	40	42	129
15	26	42	65	32	49	59	49	50	60	38	37	80
16	24	43	66	33	48	58	50	46	66	34	33	60
17	24	43	51	34	48	58	55	42	116	32	33	50
18	22	43	62	36	46	55	64	40	120	30	31	48
19	27	43	58	37	45	48	67	39	62	27	31	46
20	24	43	52	40	45	53	67	39	52	25	32	42
21	25	42	52	42	44	49	69	76	90	24	32	40
22	25	42	54	46	43	47	90	92	151	25	30	37
23	26	39	58	50	44	45	93	75	285	47	33	36
24	23	42	60	54	44	45	79	65	185	33	28	34
25	23	42	64	48	44	44	70	56	158	29	27	33
26	30	47	68	43	44	45	61	111	172	37	26	32
27	67	40	72	38	43	46	57	729	306	57	24	30
28	49	43	74	37	42	55	55	1090	367	39	38	30
29	58	48	64	40	---	61	52	702	198	35	43	30
30	75	52	52	42	---	59	54	478	140	33	42	30
31	71	---	48	44	---	56	---	538	---	34	39	---
TOTAL	1028	1317	1918	1181	1338	1631	1790	4965	4386	1432	1015	1311
MEAN	33.2	43.9	61.9	38.1	47.8	52.6	59.7	160	146	46.2	32.7	43.7
MAX	75	66	74	54	56	97	93	1090	549	122	43	176
MIN	22	38	48	31	42	41	48	39	44	24	24	24
AC-FT	2040	2610	3800	2340	2650	3240	3550	9850	8700	2840	2010	2600

CAL YR 1976 TOTAL 29785 MEAN 81.4 MAX 2470 MIN 14 AC-FT 59080
WTR YR 1977 TOTAL 23312 MEAN 63.9 MAX 1090 MIN 22 AC-FT 46240

07142620 RATTLESNAKE CREEK NEAR RAYMOND, KS

LOCATION.--Lat 38°13'50", long 98°25'00", in SW¼NW¼NW¼ sec.15, T.21 S., R.10 W., Rice County, Hydrologic Unit 11030009, at downstream side of highway bridge, 3.5 mi (5.6 km) south of Raymond, and 5.4 mi (8.7 km) upstream from mouth.

DRAINAGE AREA.--1,167 mi² (3,023 km²), of which 569 mi² (1,474 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,701.64 ft (518.660 m) above mean sea level. Prior to July 27, 1960, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for periods of no gage-height record (Oct. 31 to Mar. 21 and May 30 to June 28), which are poor.

AVERAGE DISCHARGE.--17 years, 61.4 ft³/s (1.739 m³/s), 44,480 acre-ft/yr (54.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,140 ft³/s (60.6 m³/s) Sept. 29, 1973, gage height, 8.74 ft (2.664 m); no flow at times in 1964, 1968, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1973 was the maximum known since at least 1891, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 31	unknown	* 510	14.4	[a]6.3	1.920
June 29	2100	268	7.59	5.24	1.597

[a]From floodmark

Minimum discharge, 2.9 ft³/s (0.082 m³/s) Oct. 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	9.0	15	33	41	51	47	55	350	224	16	26
2	4.4	6.6	16	31	42	52	46	79	250	198	16	18
3	3.8	8.4	17	30	43	53	42	92	160	178	16	13
4	3.5	8.4	18	29	45	53	48	92	120	151	18	11
5	3.2	8.5	19	28	46	53	51	82	100	132	17	9.0
6	3.2	8.6	20	28	47	53	54	66	80	111	13	7.0
7	3.5	8.8	20	27	48	52	56	55	60	73	12	6.2
8	3.5	9.0	20	27	48	52	55	46	50	58	13	5.4
9	3.5	9.3	20	27	49	52	54	41	45	53	13	4.7
10	3.5	9.6	20	27	49	52	59	40	40	48	12	4.4
11	3.5	9.9	20	28	50	51	55	40	35	46	19	4.4
12	3.5	10	20	29	50	54	49	37	40	40	20	5.4
13	3.5	10	20	30	50	65	45	34	50	37	17	45
14	3.5	11	21	31	50	80	43	33	80	30	9.4	42
15	3.5	11	22	32	50	87	40	33	70	30	7.4	62
16	3.2	11	23	33	50	90	37	33	60	27	6.2	68
17	3.2	12	23	34	50	80	37	33	50	25	5.0	66
18	3.2	12	22	36	50	60	41	33	40	23	4.4	55
19	2.9	12	22	37	50	40	54	29	60	22	4.4	40
20	2.9	13	23	39	50	35	65	30	70	20	4.4	37
21	3.2	13	24	41	50	32	73	60	60	16	3.8	41
22	3.5	12	25	43	50	33	79	62	50	17	4.4	30
23	3.5	12	26	45	50	35	79	65	40	16	8.6	37
24	3.5	12	28	47	50	28	78	62	80	15	5.4	47
25	3.5	12	30	47	50	32	69	56	120	15	4.4	37
26	3.8	12	32	42	50	37	65	51	160	14	3.8	32
27	5.3	13	35	40	50	36	63	49	200	14	4.1	30
28	6.2	13	38	40	50	39	58	166	230	16	22	25
29	5.8	14	38	39	---	41	55	276	252	17	20	21
30	5.8	14	36	39	---	46	55	400	264	17	16	17
31	10	---	34	40	---	44	---	450	---	17	15	---
TOTAL	124.5	327.1	747	1079	1358	1568	1652	2680	3266	1700	350.7	846.5
MEAN	4.02	10.9	24.1	34.8	48.5	50.6	55.1	86.5	109	54.8	11.3	28.2
MAX	10	14	38	47	50	90	79	450	350	224	22	68
MIN	2.9	8.4	15	27	41	28	37	29	35	14	3.8	4.4
AC-FT	247	649	1480	2140	2690	3110	3280	5320	6480	3370	696	1680

CAL YR 1976 TOTAL 22973.1 MEAN 62.8 MAX 500 MIN 1.0 AC-FT 45570
WTR YR 1977 TOTAL 15698.8 MEAN 43.0 MAX 450 MIN 2.9 AC-FT 31140

07142860 COW CREEK NEAR CLAFLIN, KS

LOCATION.--Lat 38°31'20", long 98°35'00", in NE¼NW¼ sec.6, T.18 S., R.11 W., Barton County, Hydrologic Unit 11030011, at downstream side of bridge on State Highway 4, 2.5 mi (4.0 km) west of Claflin, and at mile 97.8 (157.4 km).

DRAINAGE AREA.--43 mi² (111 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WRD KS-75: 1969(M), 1971(M), 1974(M).

GAGE.--Water-stage recorder. Datum of gage is 1,780.90 ft (542.818 m) above mean sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--11 years, 8.01 ft³/s (0.227 m³/s), 5,800 acre-ft/yr (7.15 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,060 ft³/s (143 m³/s) Aug. 29, 1975, gage height, 16.15 ft (4.923 m), from rating curve extended above 2,000 ft³/s (65.1 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 222 ft³/s (6.29 m³/s) May 31, gage height, 6.92 ft (2.109 m), no peak above base of 250 ft³/s (7.08 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.02	.00	.47	.19	29	.15	.00	.02
2	.00	.00	.00	.00	.02	.01	.47	.30	5.8	.09	.00	.02
3	.00	.00	.00	.00	.02	.02	.42	.58	2.5	.11	.00	.02
4	.00	.00	.00	.00	.02	.01	.47	.42	1.1	.05	.02	.01
5	.00	.00	.00	.00	.02	.01	.47	.25	.40	.06	.02	.00
6	.00	.00	.00	.00	.01	.01	.47	.21	.58	.06	.05	.00
7	.00	.00	.00	.00	.00	.02	.36	.19	.30	.04	.02	.00
8	.00	.00	.00	.00	.01	.02	.30	.19	.30	.03	.01	.00
9	.00	.00	.00	.00	.02	.01	.30	.17	.30	.04	.00	.00
10	.00	.00	.00	.00	.02	.07	.30	.19	.30	.04	.00	.00
11	.00	.00	.00	.00	.02	.69	.23	.17	.36	.04	.02	.00
12	.00	.00	.00	.00	.02	.47	.19	.17	.36	.04	.02	.00
13	.00	.00	.00	.00	.02	.21	.19	.19	10	.02	.01	.04
14	.00	.00	.00	.00	.02	.21	.19	.17	11	.00	.00	.02
15	.00	.00	.00	.00	.02	.15	.17	.17	7.2	.00	.00	.02
16	.00	.00	.00	.00	.02	.11	.17	.15	2.5	.00	.00	.02
17	.00	.00	.00	.00	.02	.13	.21	.13	1.1	.00	.02	.01
18	.00	.00	.00	.00	.02	.11	.25	.13	.74	.00	.02	.00
19	.00	.00	.00	.00	.02	.09	.30	.17	1.4	.00	.01	.00
20	.00	.00	.00	.01	.02	.07	.30	.21	13	.00	.00	.00
21	.00	.00	.00	.02	.02	.07	.36	.80	11	.00	.00	.00
22	.00	.00	.00	.02	.02	.09	.52	.69	58	.00	.01	.00
23	.00	.00	.00	.04	.02	.11	.52	.52	5.8	.00	.02	.00
24	.00	.00	.00	.04	.01	.13	.30	.52	1.4	.00	.02	.00
25	.00	.00	.00	.04	.00	.15	.25	.42	87	.00	.02	.00
26	.00	.00	.00	.04	.00	.15	.23	.25	1.2	.00	.00	.00
27	.00	.00	.00	.04	.00	.15	.21	.23	3.6	.00	.00	.00
28	.00	.00	.00	.03	.00	.47	.19	1.8	1.3	.00	.66	.00
29	.00	.00	.00	.02	---	.74	.17	18	.40	.00	.05	.00
30	.00	.00	.00	.02	---	.58	.17	17	.30	.00	.03	.00
31	.00	---	.00	.02	---	.47	---	142	---	.00	.02	---
TOTAL	.00	.00	.00	.34	.43	5.53	9.15	186.58	258.24	.77	1.05	.18
MEAN	.000	.000	.000	.011	.015	.18	.31	6.02	8.61	.025	.034	.006
MAX	.00	.00	.00	.04	.02	.74	.52	142	87	.15	.66	.04
MIN	.00	.00	.00	.00	.00	.00	.17	.13	.30	.00	.00	.00
AC-FT	.00	.00	.00	.7	.9	11	18	370	512	1.5	2.1	.4

CAL YR 1976 TOTAL 620.55 MEAN 1.70 MAX 237 MIN .00 AC-FT 1230
WTR YR 1977 TOTAL 462.27 MEAN 1.27 MAX 142 MIN .00 AC-FT 917

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

07142900 BLOOD CREEK NEAR BOYD, KS

LOCATION.--Lat 38°32'10", long 98°51'35", in NE¼NW¼ sec.34, T.17 S., R.14 W., Barton County, Hydrologic Unit 11030011, at downstream side of bridge on State Highway 4, 1.3 mi (2.1 km) northwest of Boyd, 4.8 mi (7.7 km) northwest of Hoisington, and 11.9 mi (19.1 km) upstream from Cheyenne Bottoms.

DRAINAGE AREA.--61 mi² (158 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1957-62. March 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,834.947 ft (559.292 m) above mean sea level. Prior to Mar. 23, 1962, crest-stage gage at site 0.7 mi (1.1 km) upstream at different datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years, 8.02 ft³/s (0.227 m³/s), 5,810 acre-ft/yr (7.16 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,860 ft³/s (109 m³/s) June 29, 1967, gage height, 14.87 ft (4.532 m); no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 2	1200	584	16.5	11.72	3.572	May 31	0100	556	15.7	11.58	3.530
May 29	1300	342	9.69	10.22	3.115	July 9	0500	* 1,440	40.8	13.42	4.090

Minimum discharge, no flow Oct. 2-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.14	.36	.25	.50	.56	.74	.56	18	.74	.59	.88
2	.00	.12	.40	.24	.54	.59	.68	300	3.9	.74	.84	.74
3	.00	.10	.40	.24	.58	.65	.71	32	1.9	.71	.88	.68
4	.00	.09	.40	.23	.62	.65	.80	4.5	1.4	.65	3.3	.62
5	.00	.08	.40	.23	.65	.62	.84	2.0	1.3	.59	1.6	.56
6	.00	.09	.42	.22	.60	.59	.77	1.6	1.2	.59	19	.53
7	.00	.09	.38	.22	.55	.62	.77	1.3	1.2	.74	16	.50
8	.00	.10	.40	.22	.58	.65	.71	1.3	1.1	46	1.5	.50
9	.00	.12	.42	.21	.60	.68	.71	1.4	1.1	806	.68	.50
10	.00	.14	.42	.21	.62	.71	.71	29	1.0	75	.50	.53
11	.00	.16	.38	.21	.64	.77	.71	5.8	.96	20	.50	.50
12	.00	.18	.40	.20	.60	.88	.71	2.0	1.0	2.7	.50	.71
13	.00	.18	.42	.20	.54	.80	.71	1.4	1.3	1.3	.50	.77
14	.00	.22	.44	.20	.51	.71	.74	1.2	25	1.0	.48	.62
15	.00	.26	.44	.19	.50	.68	.71	1.1	4.2	.88	.48	.53
16	.00	.26	.44	.19	.52	.65	.68	1.1	1.4	.84	.46	.56
17	.00	.28	.44	.19	.56	.68	.71	1.0	1.2	.77	.48	.53
18	.00	.28	.44	.21	.56	.65	.88	1.0	1.0	.71	.46	.62
19	.00	.28	.44	.24	.56	.65	.88	1.0	.96	.68	.46	.53
20	.00	.28	.42	.27	.53	.65	.80	1.1	.96	.65	.46	.50
21	.00	.30	.38	.30	.56	.65	.77	10	1.4	.65	.44	.42
22	.00	.30	.40	.33	.59	.65	.96	10	3.1	.68	.63	.38
23	.00	.30	.40	.36	.65	.65	.88	1.9	1.3	.71	22	.34
24	.00	.30	.42	.39	.65	.65	.74	1.1	1.0	.65	2.1	.34
25	.00	.32	.44	.42	.59	.65	.62	1.0	8.9	.68	.74	.32
26	.00	.31	.44	.45	.56	.65	.59	.92	1.4	.88	.56	.32
27	.09	.31	.46	.50	.56	.68	.56	.92	1.2	.80	.44	.30
28	.18	.31	.46	.42	.56	.96	.56	.92	.92	.65	92	.28
29	.22	.32	.44	.38	---	.96	.56	179	.77	.62	54	.30
30	.22	.32	.42	.42	---	.77	.56	164	.77	.59	7.2	.34
31	.18	---	.25	.46	---	.74	---	263	---	.56	1.8	---
TOTAL	.90	6.54	12.77	8.80	16.08	21.45	21.77	1023.12	90.86	968.76	231.58	15.25
MEAN	.029	.22	.41	.28	.57	.69	.73	33.0	3.03	31.3	7.47	.51
MAX	.22	.32	.46	.50	.65	.96	.96	300	25	806	92	.88
MIN	.00	.08	.25	.19	.50	.56	.56	.56	.77	.56	.44	.28
AC-FT	1.8	13	25	17	32	43	43	2030	180	1920	459	30

CAL YR 1976 TOTAL 612.14 MEAN 1.67 MAX 233 MIN .00 AC-FT 1210
WTR YR 1977 TOTAL 2417.86 MEAN 6.62 MAX 806 MIN .00 AC-FT 4800

07142900 BLOOD CREEK NEAR BOYD, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY					
02...	1330	547	200	7500	11100
SEP					
08...	1145	.53	800	233	.33

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM
MAY							
02...	1330	547	7500	75	88	96	100

07143300 COW CREEK NEAR LYONS, KS

LOCATION.--Lat 38°18'30", long 98°11'30", in SW¼SE¼ sec.15, T.20 S., R.8 W., Rice County, Hydrologic Unit 11030011, at downstream side of Missouri Pacific Railroad bridge, 500 ft (150 m) downstream from Little Cow Creek, 3.0 mi (4.8 km) south of Lyons, and 33 mi (53 km) upstream from mouth.

DRAINAGE AREA.--728 mi² (1,890 km²), includes 229 mi² (593 km²) in Cheyenne Bottoms, closed basin.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to September 1951. Occasional low-flow measurements, water years 1954-60. Annual maximum, water years 1960-61. October 1961 to current year. Prior to April 1938, monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 877: 1938(M). WSP 1117: Drainage area. WSP 1177: 1950(M).

GAGE.--Water-stage recorder. Datum of gage is 1,628.16 ft (496.263 m) above mean sea level (levels by Corps of Engineers). Prior to July 3, 1938, nonrecording gage at present site and datum. July 3, 1938, to Sept. 30, 1951, water-stage recorder at site 60 ft (18 m) upstream at same datum. October 1959, to Mar. 12, 1962, crest-stage gage at present site and datum.

REMARKS.--Records fair except those for winter periods, which are poor. Natural flow of stream affected by releases from Cheyenne Bottoms, which in turn is affected by diversions from Arkansas River and Walnut Creek.

AVERAGE DISCHARGE.--30 years, 86.8 ft³/s (2.458 m³/s), 62,890 acre-ft/yr (77.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,100 ft³/s (683 m³/s) Sept. 26, 1973, gage height, 20.38 ft (6.212 m), from rating curve extended above 7,200 ft³/s (200 m³/s); no flow at times during 1938, 1946.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 22.75 ft (6.934 m) July 11, 1929, from information by Missouri Pacific Railroad Co. Flood on Oct. 20, 1941 reached a stage of 20.49 ft (6.245 m), discharge, 12,400 ft³/s (351 m³/s), from rating curve extended above 2,700 ft³/s (76.5 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 26	1500	2,270	64.3	17.18	5.236
Sept. 1	1600	1,940	54.9	17.02	5.188
Sept. 13	2000	* 3,360	95.2	17.58	5.358

Minimum discharge, 2.8 ft³/s (0.079 m³/s) Oct. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	6.4	5.8	5.2	8.6	8.5	12	7.9	648	29	20	1310
2	4.1	5.9	5.9	5.4	8.6	8.8	10	11	600	24	17	981
3	3.7	5.0	5.8	5.6	8.8	8.8	9.4	16	193	20	15	363
4	3.4	4.3	5.8	5.8	9.0	8.8	14	28	56	17	230	110
5	3.7	4.3	5.8	6.0	9.3	8.8	13	16	31	15	210	43
6	3.6	4.4	5.9	6.0	9.6	9.1	13	11	22	14	100	26
7	3.8	4.2	5.9	5.8	9.8	9.5	12	9.9	18	12	70	20
8	3.9	4.3	6.0	5.8	10	9.6	10	8.9	16	12	50	17
9	4.2	4.8	6.5	5.8	10	9.3	9.5	8.6	14	12	30	14
10	4.0	4.8	6.3	6.0	10	9.1	8.8	8.3	12	16	20	13
11	3.9	4.6	6.6	6.2	10	10	8.1	7.9	12	15	30	12
12	3.5	4.4	6.1	6.0	10	15	7.9	7.8	10	13	25	12
13	3.6	4.6	6.2	6.0	10	26	7.6	7.7	11	11	20	1730
14	3.4	4.8	6.5	6.2	10	15	8.0	7.7	11	10	15	1260
15	3.0	5.4	6.7	6.5	10	12	7.7	7.8	17	8.7	12	244
16	3.1	5.9	6.3	7.0	9.9	11	7.4	7.8	26	8.3	9.0	67
17	3.1	5.9	6.4	7.0	9.5	9.6	8.2	8.9	18	7.9	9.1	34
18	3.4	5.8	6.1	6.8	9.6	8.7	10	8.6	17	7.9	9.3	25
19	3.4	5.6	6.0	6.8	8.9	8.1	12	9.3	14	8.1	8.5	20
20	3.5	5.2	6.4	7.0	8.8	7.8	16	9.2	15	7.8	7.6	18
21	4.1	5.1	6.3	7.3	8.7	7.9	21	36	493	7.4	7.4	17
22	4.2	4.9	6.1	7.6	8.7	8.0	23	44	720	8.5	8.1	15
23	4.4	4.9	5.6	8.0	8.5	7.6	18	64	572	10	154	15
24	3.9	5.0	5.6	8.4	8.8	7.7	17	34	244	8.5	160	14
25	4.2	4.9	5.5	8.8	8.9	8.1	12	21	883	9.4	252	13
26	5.3	5.1	5.6	9.2	9.1	8.3	9.7	15	1960	12	90	13
27	7.5	5.0	5.7	9.6	9.3	8.3	9.6	12	1360	10	36	13
28	9.6	5.4	5.6	9.2	9.0	11	8.6	11	357	9.0	338	13
29	11	5.4	5.4	9.0	---	12	9.7	13	100	9.0	835	112
30	9.8	5.6	5.2	8.8	---	13	8.0	31	42	15	1030	217
31	7.5	---	5.0	8.6	---	13	---	343	---	25	609	---
TOTAL	144.1	151.9	184.6	217.4	261.4	318.4	341.2	832.3	8492	392.5	4427.0	6761
MEAN	4.65	5.06	5.95	7.01	9.34	10.3	11.4	26.8	283	12.7	143	225
MAX	11	6.4	6.7	9.6	10	26	23	343	1960	29	1030	1730
MIN	3.0	4.2	5.0	5.2	8.5	7.6	7.4	7.7	10	7.4	7.4	12
AC-FT	286	301	366	431	518	632	677	1650	16840	779	8780	13410

CAL YR 1976 TOTAL 13583.0 MEAN 37.1 MAX 1370 MIN 3.0 AC-FT 26940
WTR YR 1977 TOTAL 22523.8 MEAN 61.7 MAX 1960 MIN 3.0 AC-FT 44680

07143300 COW CREEK NEAR LYONS, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
FEB					
15...	1330	9.9	1960	62	1.7
JUN					
20...	1230	14	910	283	11
23...	1325	605	250	760	1240
28...	1230	432	186	682	795

07143330 ARKANSAS RIVER NEAR HUTCHINSON, KS

LOCATION.--Lat 37°56'47", long 97°46'29", in SW¼NW¼SW¼ sec.21, T.24 S., R.4 W., Reno County, Hydrologic Unit 11030010, at downstream side of highway bridge, 3.0 mi (4.8 km) north of Haven, 4.5 mi (7.2 km) downstream from Cow Creek, 11 mi (17.7 km) southeast of Hutchinson, and at mile 800.3 (1,287.7 km).

DRAINAGE AREA.--38,910 mi² (100,780 km²), of which 7,186 mi² (18,612 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,454.10 ft (443.210 m) above mean sea level. Prior to June 22, 1960, nonrecording gage at present site and datum.

REMARKS.--Records good except those for January, which are poor. Flow slightly regulated by John Martin Reservoir (see sta 07130000).

AVERAGE DISCHARGE.--18 years, 646 ft³/s (18.29 m³/s), 468,000 acre-ft/yr (577 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s (700 m³/s) Sept. 28, 1973, gage height, 12.95 ft (3.947 m); minimum, 30 ft³/s (0.85 m³/s) Oct. 4, 5, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1901, that of Sept. 28, 1973, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 25	0800	3,640	103	6.91	2.106
Sept. 2	0800	* 6,300	178	8.50	2.591
Sept. 13	1200	2,470	70.0	6.38	1.945

Minimum daily discharge, 100 ft³/s (2.83 m³/s) Dec. 30 to Jan. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	339	175	150	100	110	117	126	221	679	945	254	3570
2	298	180	147	100	120	118	123	208	1180	757	322	5310
3	262	172	152	100	126	139	125	204	1180	636	266	2960
4	246	170	160	100	134	130	158	205	1100	567	250	1980
5	238	168	151	100	150	125	146	217	716	519	289	1490
6	225	162	148	100	163	118	132	230	549	484	482	782
7	224	154	148	100	154	118	130	238	468	450	395	600
8	215	150	158	100	139	118	130	222	415	428	335	499
9	201	150	149	100	142	118	130	193	378	399	319	426
10	190	150	164	100	146	120	130	170	345	374	286	371
11	176	154	146	120	146	158	137	155	317	345	740	335
12	170	150	138	120	149	158	141	156	332	323	440	336
13	164	150	146	150	147	143	178	251	303	311	324	1870
14	151	150	143	150	153	134	181	321	285	298	273	1780
15	149	148	143	150	155	138	146	250	273	284	247	1710
16	142	138	147	150	156	142	138	206	277	279	236	1920
17	139	131	150	150	153	142	173	215	283	269	260	1420
18	138	126	151	150	147	142	231	197	282	263	340	725
19	146	126	153	150	146	139	217	174	281	260	376	560
20	142	126	170	150	142	131	190	180	308	254	344	471
21	142	125	173	150	142	129	192	1230	297	250	300	421
22	139	126	132	150	142	130	194	868	636	262	271	389
23	138	125	137	200	144	126	202	534	1180	259	661	365
24	140	125	143	200	141	122	208	353	1600	250	567	340
25	139	133	151	200	137	119	203	286	3110	240	613	330
26	138	138	138	200	133	116	195	254	2290	240	412	318
27	165	198	131	160	124	116	185	247	1860	240	393	302
28	146	171	137	150	121	172	181	241	1750	235	824	294
29	144	312	140	114	---	186	175	262	1780	238	1570	500
30	167	354	130	110	---	146	188	350	1620	235	1310	416
31	170	---	100	110	---	135	---	502	---	255	1150	---
TOTAL	5583	4837	4526	4184	3962	4145	4985	9340	26074	11149	14849	32790
MEAN	180	161	146	135	142	134	166	301	869	360	479	1093
MAX	339	354	173	200	163	186	231	1230	3110	945	1570	5310
MIN	138	125	100	100	110	116	123	155	273	235	236	294
AC-FT	11070	9590	8980	8300	7860	8220	9890	18530	51720	22110	29450	65040

CAL YR 1976 TOTAL 127918 MEAN 350 MAX 5280 MIN 69 AC-FT 253700
WTR YR 1977 TOTAL 126424 MEAN 346 MAX 5310 MIN 100 AC-FT 250800

07143330 ARKANSAS RIVER NEAR HUTCHINSON, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to September 1976.
WATER TEMPERATURES: October 1960 to September 1976.
SUSPENDED-SEDIMENT DISCHARGE: October 1960 to June 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
OCT										
04...	190	1640	7.7	17.0	40	8.6	17	42000	77	14
NOV										
03...	119	2940	7.8	7.0	8	11.0	37	4000	76	13
DEC										
06...	140	3380	7.7	1.0	7	13.6	20	87000	100	24
JAN										
12...	120	4480	7.7	.0	5	7.2	62	280000	120	28
FEB										
01...	110	3800	7.6	.0	8	11.8	39	61000	110	25
MAR										
01...	106	5100	7.8	2.5	8	13.0	29	20000	110	27
APR										
05...	150	3680	7.8	4.0	20	12.8	48	77000	96	23
MAY										
03...	230	4750	8.0	20.0	40	9.3	90	38000	100	26
JUN										
08...	427	2530	8.1	22.0	85	8.7	64	26000	79	17
JUL										
06...	285	2450	8.2	25.5	55	8.5	32	230000	92	21
AUG										
02...	310	1970	7.8	23.5	160	7.2	63	100000	97	21
SEP										
12...	420	2340	7.9	24.0	35	8.5	28	50000	90	18

DATE	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
OCT										
04...	260	8.1	220	0	180	7.0	120	380	979	1.33
NOV										
03...	250	3.1	270	0	221	6.8	210	290	1690	2.30
DEC										
06...	570	6.0	280	0	230	8.9	210	420	1880	2.56
JAN										
12...	790	7.0	330	0	271	11	200	1200	2490	3.39
FEB										
01...	750	5.7	280	0	230	11	210	960	2120	2.88
MAR										
01...	910	7.0	280	0	230	7.1	220	1400	2860	3.89
APR										
05...	620	6.0	260	0	213	6.6	200	1100	2010	2.73
MAY										
03...	840	7.5	200	0	164	3.2	240	1200	2480	3.37
JUN										
08...	410	9.4	190	0	156	2.4	110	590	1370	1.86
JUL										
06...	430	9.2	210	0	172	2.1	150	630	1420	1.93
AUG										
02...	340	12	140	0	115	3.6	110	490	1120	1.52
SEP										
12...	360	7.2	210	0	172	4.2	130	550	1320	1.80

07143330 ARKANSAS RIVER NEAR HUTCHINSON, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SOLIDS (TONS PER DAY)	TOTAL RESI- DUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (NO3) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)
OCT									
04...	502	1090	.90	.43	1.1	1.5	2.4	11	.48
NOV									
03...	543	1750	.47	.00	1.1	1.1	1.6	7.0	.42
DEC									
06...	711	1910	1.2	.87	1.1	2.0	3.2	14	.50
JAN									
12...	807	2540	1.4	1.6	.80	2.4	3.8	17	.72
FEB									
01...	630	2150	1.3	1.2	2.5	3.7	5.0	22	.49
MAR									
01...	819	2910	.88	1.1	.70	1.8	2.7	12	.58
APR									
05...	814	2070	.71	1.0	.80	1.8	2.5	11	.48
MAY									
03...	1540	2620	.53	.25	2.0	2.2	2.7	12	.42
JUN									
08...	1580	1580	.23	.03	2.3	2.3	2.5	11	.48
JUL									
06...	1090	1590	.59	.01	2.1	2.1	2.7	12	.43
AUG									
02...	937	1710	.77	.29	3.5	3.8	4.6	20	.72
SEP									
12...	1500	1400	1.5	.21	.03	.24	1.7	7.7	.40

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SUS- PENDED SEDI- MENT (MG/L)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY)
OCT					
27...	1125	168	2200	94	43
MAR					
25...	0940	122	1100	15	4.9
AUG					
24...	1200	505	--	564	769

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAM- PLING POINTS	SUS- PENDED SEDI- MENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
OCT										
27...	1125	9	94	0	1	41	70	83	97	100
MAY										
12...	1530	12	--	0	11	64	85	94	100	--

07143665 LITTLE ARKANSAS RIVER AT ALTA MILLS, KS

LOCATION.--Lat 38°06'44", long 97°35'30", in SW¼NW¼NW¼ sec.30, T.22 S., R.2 W., Harvey County, Hydrologic Unit 11030012, at downstream side of county highway bridge, 0.4 mi (0.6 km) south of Alta Mills, 0.8 mi (1.3 km) downstream from Sand Creek, and at mile 50.1 (80.6 km).

DRAINAGE AREA.--736 mi^2 (1,910 km^2), of which 55 mi^2 (140 km^2) is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,395 ft (425.2 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft^3/s (433 m^3/s) Oct. 12, 1973, gage height, 27.42 ft (8.358 m) from rating curve extended above 7,000 ft^3/s (198 m^3/s); minimum, 2.9 ft^3/s (0.082 m^3/s) Aug. 31, Sept. 1, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
May 22	1500	1,190	33.7	11.53	3.514
May 31	0200	1,300	36.8	12.02	3.664
June 22	1700	7,350	208	23.65	7.208
June 25	0400	* 7,700	218	24.00	7.315
July 3	1500	6,290	178	22.54	6.870
Aug. 5	1200	1,090	30.9	11.07	3.374
Aug. 30	2300	2,720	77.0	16.44	5.011
Sept. 4	0500	5,710	162	21.89	6.672
Sept. 16	0200	1,650	46.7	13.38	4.078

Minimum discharge, 4.8 ft^3/s (0.14 m^3/s) Oct. 17-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	11	7.3	7.0	11	10	27	12	583	292	36	2300
2	6.9	9.3	7.6	7.0	11	9.9	19	14	698	2010	34	3590
3	6.9	9.2	7.8	6.8	11	9.3	15	14	419	5770	34	5110
4	6.2	8.5	7.9	7.0	11	9.2	14	14	344	4160	429	5390
5	6.0	7.8	8.4	7.2	11	9.4	12	13	185	1020	999	2780
6	6.0	7.3	8.6	7.5	11	9.8	12	12	82	246	580	730
7	5.9	7.0	8.6	7.8	11	9.7	16	11	54	143	297	367
8	5.8	6.7	8.6	7.6	12	8.5	17	11	40	106	168	236
9	5.8	6.5	8.4	7.4	13	7.6	14	11	26	85	151	169
10	5.8	6.3	8.4	7.2	13	7.5	12	10	18	71	75	123
11	5.8	6.2	8.4	7.2	15	7.7	10	9.8	14	62	327	93
12	5.8	6.5	8.4	7.2	16	8.4	10	9.3	15	55	202	80
13	5.4	6.5	8.9	7.2	17	11	10	9.2	19	49	97	288
14	5.4	6.6	8.8	7.6	17	22	11	9.2	71	44	59	843
15	5.1	6.7	8.9	7.6	16	15	11	9.0	99	39	49	1520
16	5.0	7.3	9.0	7.6	13	11	13	8.8	58	36	39	1340
17	4.8	7.7	9.0	7.8	12	9.5	17	9.1	47	32	44	269
18	4.8	8.0	9.1	8.0	13	8.6	20	18	34	29	54	139
19	4.8	8.2	9.2	8.6	13	8.1	26	55	1320	25	51	98
20	4.8	8.2	8.9	9.0	13	7.6	32	39	3270	21	41	77
21	4.8	8.3	8.6	9.2	13	7.6	32	685	4530	20	34	66
22	4.9	8.4	8.6	9.8	12	7.6	29	1160	6530	166	31	58
23	5.0	8.4	9.1	10	12	7.6	28	1010	6840	405	291	53
24	5.0	8.4	8.8	11	12	7.8	39	480	7360	159	579	48
25	5.0	8.2	8.8	12	11	7.8	42	168	7360	87	425	45
26	5.8	8.2	8.9	12	11	7.8	36	82	5970	56	169	42
27	7.4	8.2	9.2	12	10	7.8	30	54	4830	48	77	40
28	8.0	8.0	9.4	11	10	9.4	22	44	2440	44	323	38
29	8.5	7.6	9.0	11	---	11	15	99	773	37	1930	38
30	10	7.2	8.3	11	---	17	13	646	444	36	2560	70
31	11	---	7.5	11	---	29	---	1040	---	40	2000	---
TOTAL	189.9	232.4	266.4	270.3	351	320.2	604	5766.4	54473	15393	12185	26040
MEAN	6.13	7.75	8.59	8.72	12.5	10.3	20.1	186	1816	497	393	868
MAX	11	11	9.4	12	17	29	42	1160	7360	5770	2560	5390
MIN	4.8	6.2	7.3	6.8	10	7.5	10	8.8	14	20	31	38
AC-FT	377	461	528	536	696	635	1200	11440	108000	30530	24170	51650

CAL YR 1976 TOTAL 49673.6 MEAN 136 MAX 6870 MIN 3.0 AC-FT 98530
WTR YR 1977 TOTAL 116091.6 MEAN 318 MAX 7360 MIN 4.8 AC-FT 230300

07143665 LITTLE ARKANSAS RIVER AT ALTA MILLS, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR					
25...	1225	7.8	2250	142	3.0
MAY					
23...	1650	940	370	622	1580
JUN					
30...	1100	777	390	289	606
AUG					
15...	1355	48	540	224	29
24...	1530	632	880	1060	1810

07144200 LITTLE ARKANSAS RIVER AT VALLEY CENTER, KS

LOCATION.--Lat 37°49'56", long 97°23'16", river gage is in NE¼NW¼SW¼ sec.36, T.25 S., R.1 W., Sedgwick County, Hydrologic Unit 11030012, at downstream side of highway bridge, 0.5 mi (0.8 km) west of Valley Center, and 17.5 mi (28.2 km) upstream from mouth. Little Arkansas River Floodway gage is in NE¼NE¼NE¼ sec.34, T.25 S., R.1 W., at downstream side of highway bridge, 1.2 mi (1.9 km) northwest of river gage.

DRAINAGE AREA.--1,327 mi² (3,437 km²), of which about 77 mi² (199 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1922 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1037: 1944. WSP 1117: Drainage area. WSP 1241: 1923, 1924-26(M), 1928-29(M), 1930(M, m), 1931(M),1932(M, m), 1933(M), 1934, 1937(M), 1949(M). WSP 1711: 1958.

GAGE.--River gage is water-stage recorder. Datum of gage is 1,325.66 ft (404.061 m) above mean sea level. Prior to Feb. 12, 1935, nonrecording gage at site 2.0 mi (3.2 km) downstream at different datum. Feb. 12, 1935, to July 1, 1951, water-stage recorder, July 2, 1951, to Feb. 16, 1952, nonrecording gage, and Feb. 17, 1952, to Sept. 30, 1974, water-stage recorder at present site and at datum 2.00 ft (0.610 m) higher. Floodway gage is water-stage recorder. Datum of floodway gage is 1,340.00 ft (408.432 m) above mean sea level (levels by Wichita-Valley Center Flood Control project).

REMARKS.--Combined records good except those for winter periods, which are poor. Natural flow of stream affected by diversions and ground-water withdrawal for irrigation and municipal supply. Since May 1957, part of high-water flow bypasses river gage through floodway channel for which separate records are computed; figures representing combined discharge are given herein. Discharge, in cubic feet per second, through floodway occurred only on the days given herewith:

Water Year October 1976 to September 1977

May 21	135	June 22	5,430	July 3	2,250	Aug. 31	1,200
22	1,970	23	6,720	4	3,610	Sept. 1	2,600
23	3,160	24	4,680	5	3,430	2	3,270
24	797	25	4,200	6	695	3	3,160
31	1,100	26	4,610	Aug. 5	1,980	4	3,210
June 1	335	27	4,060	6	741	5	3,220
20	2,170	28	3,310	11	2,240	6	2,470
21	4,310	29	2,480	12	2,690		

AVERAGE DISCHARGE.--55 years, 278 ft³/s (7.873 m³/s), 201,400 acre-ft/yr (248 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,000 ft³/s (906 m³/s) Apr. 16, 1945, gage height, 24.05 ft (7.330 m), present datum, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.0 ft³/s (0.028 m³/s) Oct. 6, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 23	0800	5,790	.164	--	--	July 4	0900	6,130	174	--	--
May 31	1800	4,440	126	--	--	Aug. 5	1400	5,010	142	--	--
June 21	0400	7,400	210	--	--	Aug. 11	2100	7,530	213	--	--
June 22	2400	*11,100	314	--	--	Sept. 2	1000	5,920	168	--	--
June 26	1400	7,490	212	--	--						

Minimum discharge, 25 ft³/s (0.71 m³/s) June 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	42	39	34	39	34	58	90	1920	574	473	4790
2	34	38	39	33	38	37	56	95	745	432	281	5800
3	31	37	40	32	38	40	52	63	671	4180	228	5590
4	29	35	41	31	39	37	70	56	423	6120	464	5690
5	28	36	42	30	40	35	68	54	338	5860	3910	5740
6	27	35	41	30	40	35	48	51	215	2100	2560	4720
7	27	34	41	31	40	36	47	48	112	413	855	920
8	27	34	40	31	41	36	45	45	69	385	483	494
9	27	34	42	31	41	36	47	42	54	259	328	358
10	31	34	40	32	42	37	47	42	39	234	283	298
11	31	34	39	32	43	34	45	40	29	207	3890	247
12	30	33	40	33	45	35	42	37	59	179	5010	213
13	29	33	40	34	45	38	49	38	46	153	985	650
14	30	34	40	35	45	36	66	37	62	137	481	1900
15	28	36	40	36	43	37	60	40	77	124	288	1390
16	26	36	41	36	42	41	57	49	99	112	210	1690
17	26	37	42	37	42	40	83	47	63	104	181	1330
18	28	39	42	37	40	38	92	54	48	94	169	445
19	27	40	42	38	38	34	72	73	138	87	170	286
20	27	39	40	38	38	33	68	109	4170	90	163	223
21	27	38	38	38	38	32	71	1120	6880	79	147	185
22	29	39	38	38	39	33	70	3940	8170	252	137	162
23	30	39	38	39	35	33	65	5510	9690	965	353	151
24	29	41	39	41	35	34	63	2430	7470	684	621	140
25	29	42	39	42	36	35	62	578	6880	320	700	133
26	28	40	38	43	35	35	69	271	7320	212	515	126
27	32	39	40	42	35	35	66	153	6660	159	294	119
28	35	38	40	41	34	44	61	105	5780	140	236	113
29	37	38	40	39	---	87	56	228	4650	131	652	115
30	44	39	38	38	---	61	51	586	1010	119	1660	125
31	51	---	36	38	---	78	---	2780	---	663	3210	---
TOTAL	952	1113	1235	1110	1106	1236	1785	18811	73887	25488	29937	44143
MEAN	30.7	37.1	39.8	35.8	39.5	39.9	59.5	607	2463	822	966	1471
MAX	51	42	42	43	45	87	92	5510	9690	6120	5010	5800
MIN	26	33	36	30	34	32	42	37	29	79	137	113
AC-FT	1890	2210	2450	2200	2190	2450	3540	37310	146600	50560	59380	87560

CAL YR 1976 TOTAL 85635 MEAN 234 MAX 10400 MIN 21 AC-FT 169900
WTR YR 1977 TOTAL 200803 MEAN 550 MAX 9690 MIN 26 AC-FT 398300

07144200 LITTLE ARKANSAS RIVER AT VALLEY CENTER, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1957 to September 1961.
SUSPENDED-SEDIMENT DISCHARGE: October 1957 to September 1961.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
OCT										
04...	29	808	7.7	17.5	15	11.0	4	350	82	12
NOV										
03...	37	758	7.6	11.0	7	13.0	20	190	63	6.6
DEC										
06...	38	890	7.7	3.0	3	13.5	15	110	82	14
JAN										
12...	35	1190	7.4	.0	3	12.4	28	1320	120	18
FEB										
01...	43	1130	7.7	2.0	3	14.6	24	160	110	18
MAR										
01...	35	1040	8.0	7.0	5	12.2	12	20	47	16
APR										
05...	43	1170	7.9	10.0	10	13.1	36	500	100	17
MAY										
03...	59	1300	7.7	24.0	35	7.2	50	1000	110	20
JUN										
08...	160	545	7.5	24.0	95	6.5	60	5100	50	9.7
JUL										
06...	1570	276	7.3	27.0	120	5.7	40	1530	31	7.4
AUG										
02...	260	308	7.2	25.0	140	6.4	48	13000	31	9.1
SEP										
12...	225	708	7.5	23.5	50	7.4	29	5600	68	12

DATE	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
OCT										
04...	71	4.9	300	0	246	9.6	64	81	484	.66
NOV										
03...	25	2.3	300	0	246	12	50	70	443	.60
DEC										
06...	86	4.6	320	0	262	10	60	98	527	.72
JAN										
12...	120	4.7	360	0	295	23	90	170	709	.96
FEB										
01...	100	4.5	330	0	271	11	110	150	678	.92
MAR										
01...	100	4.4	300	0	246	4.8	71	170	615	.84
APR										
05...	110	5.5	320	0	262	6.4	82	200	686	.93
MAY										
03...	130	7.5	190	0	156	6.1	68	240	728	.99
JUN										
08...	37	11	120	0	98	6.1	33	69	313	.43
JUL										
06...	18	13	80	0	66	6.4	17	26	168	.23
AUG										
02...	23	9.8	84	0	69	8.5	16	36	188	.26
SEP										
12...	51	6.9	180	0	148	9.1	41	84	398	.54

07144200 LITTLE ARKANSAS RIVER AT VALLEY CENTER, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SOLIDS (TONS PER DAY)	TOTAL RESI- DUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO- GEN (N) (MG/L)	TOTAL ORGANIC NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (NO3) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)
OCT 04...	37.9	518	.79	.01	.65	.66	1.5	6.4	.95
NOV 03...	44.7	470	.52	.17	.44	.61	1.1	5.0	.89
DEC 06...	54.1	534	.68	.28	.17	.45	1.1	5.0	1.2
JAN 12...	67.0	728	.78	1.6	.60	2.2	3.0	13	1.3
FEB 01...	78.7	685	.82	1.9	5.8	7.7	8.5	38	1.4
MAR 01...	58.1	632	.53	.98	.52	1.5	2.0	9.0	1.1
APR 05...	79.6	724	.57	.51	1.1	1.6	2.2	9.6	1.1
MAY 03...	116	880	.85	.49	1.3	1.8	2.7	12	1.0
JUN 08...	86.5	597	.91	.14	1.5	1.6	2.5	11	.90
JUL 06...	712	519	.34	.21	1.4	1.6	1.9	8.6	.61
AUG 02...	132	673	.62	.30	1.7	2.0	2.6	12	.71
SEP 12...	242	522	.97	.08	.16	.24	1.2	5.4	.62

07144300 ARKANSAS RIVER AT WICHITA, KS

LOCATION.--Lat 37°38'41", long 97°20'06", river gage is in SE¼SE¼NE¼ sec.5, T.28 S., R.1 E., Sedgwick County, Hydrologic Unit 11030013, at bridge on U.S. Highway 81 in Wichita, 3.7 mi (6.0 km) downstream from mouth of Little Arkansas River and at mile 759.7 (1,222 km). Big Slough-Cowskin Floodway gage is in sec.11, T.27 S., R.1 W., Sedgwick County, at downstream side of Bickel Avenue Bridge in Wichita, 1.0 mi (1.6 km) downstream from control structure and 6.5 mi (10.5 km) northwest of U.S. Highway 81 gage.

DRAINAGE AREA.--40,490 mi^2 (104,900 km^2), of which 7,263 mi^2 (18,810 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1934 to current year. Gage-height records collected at site 3.2 mi (5.1 km) upstream since 1897 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1241: 1940, 1944. WSP 1341: Drainage area.

GAGE.--River gage is water-stage recorder. Datum of gage is 1,267.42 ft (386.310 m) above mean sea level. See WSP 1921 for history of changes prior to Oct. 1, 1968. Floodway gage is water-stage recorder. Datum of floodway gage is 1,300.00 ft (396.240 m) above mean sea level (levels by Wichita-Valley Center Flood Control Project).

REMARKS.--Records fair except those for winter periods, which are poor. Flow slightly regulated by John Martin Reservoir since 1943 (see sta 07130000). Considerable low-flow regulation by City of Wichita dam 2.2 mi (3.5 km) upstream. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Since May 1957, part of high-water flow bypasses river gage through floodway channel for which separate records are computed; figures representing floodway discharge and combined discharge are given herein. Discharge through floodway occurred only on the days given in the following table:

1977

	ft^3/s	m^3/s		ft^3/s	m^3/s
June 22	178	5.04	June 27	336	9.52
June 23	1,040	29.5	June 28	35	0.99
June 24	324	9.18	Aug. 12	17	0.48
June 25	268	7.59	Sept. 2	642	18.2
June 26	576	16.3	Sept. 3	338	9.57

AVERAGE DISCHARGE.--43 years, 1,092 ft^3/s (30.93 m^3/s), 791,200 acre-ft/yr (976 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,400 ft^3/s (1,120 m^3/s) Oct. 1, 1973; minimum, 3.0 ft^3/s (0.085 m^3/s) Sept. 3, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of May 18, 1877, and July 8, 1904, reached stages of 21 ft (6.4 m) and 20.3 ft (6.19 m), respectively, river gage site and datum then in use (from reports of U.S. Weather Bureau).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft^3/s (105 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
May 23	1915	8,050	228	7.57	2.307	Aug. 12	0630	8,620	244	--	--
June 23	0900	*14,300	405	--	--	Sept. 2	1445	11,900	337	--	--
July 4	1015	7,090	201	7.30	2.225	Sept. 14	1200	6,180	175	6.85	2.088

Minimum daily discharge, 80 ft^3/s (2.27 m^3/s) Jan. 9, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	500	209	171	139	216	199	238	281	3070	2310	954	5040
2	400	197	186	140	204	211	214	328	2190	1560	519	11000
3	350	193	236	150	200	221	257	319	2280	2630	507	9480
4	292	188	238	150	214	216	271	329	2110	6860	585	7510
5	291	178	232	160	236	215	244	288	1830	6230	1630	7390
6	258	180	234	160	226	206	237	285	1350	3560	2580	5990
7	240	174	178	170	226	200	216	268	1010	1340	1760	3070
8	227	169	172	120	214	192	208	261	834	1170	962	1610
9	218	173	187	80	217	190	205	250	716	875	651	1260
10	209	167	295	85	220	200	207	213	636	769	581	1070
11	200	169	165	85	218	202	200	216	588	694	2240	947
12	182	158	217	90	221	196	188	215	615	646	6980	844
13	176	158	264	95	217	219	344	204	594	591	2690	1040
14	170	159	254	95	217	212	288	222	558	552	1300	5070
15	164	162	256	100	213	199	279	366	539	513	799	3980
16	157	164	250	90	218	205	288	308	540	475	623	3770
17	149	166	260	80	224	204	324	339	534	439	584	4190
18	149	164	260	90	227	205	320	274	492	407	493	2310
19	149	160	250	100	222	193	314	347	552	379	558	1360
20	149	157	210	120	218	177	362	439	1490	356	570	1070
21	149	156	182	130	216	180	312	1410	6810	340	528	913
22	143	152	200	140	215	174	309	3920	8820	411	523	836
23	148	152	230	160	222	174	302	6490	12500	846	697	751
24	143	156	293	170	216	169	289	4730	9650	1220	1260	702
25	142	158	313	180	214	170	281	1970	9320	625	1350	643
26	144	167	293	188	214	174	278	1010	10500	593	1280	615
27	187	162	260	170	209	175	287	786	9540	398	899	595
28	176	149	230	155	203	382	281	726	8060	366	752	560
29	222	147	216	170	---	256	289	764	5990	347	1180	618
30	258	146	160	180	---	285	284	1350	3720	349	2790	765
31	216	---	137	200	---	251	---	2180	---	546	3460	---
TOTAL	6558	4990	7029	4142	6077	6452	8116	31088	107438	38397	42285	84999
MEAN	212	166	227	134	217	208	271	1003	3581	1239	1364	2833
MAX	500	209	313	200	236	382	362	6490	12500	6860	6980	11000
MIN	142	146	137	80	200	169	188	204	492	340	493	560
AC-FT	13010	9900	13940	8220	12050	12800	16100	61660	213100	76160	83870	168600

CAL YR 1976 TOTAL 245007 MEAN 669 MAX 18300 MIN 120 AC-FT 486000
WTR YR 1977 TOTAL 347571 MEAN 952 MAX 12500 MIN 80 AC-FT 689400

07144550 ARKANSAS RIVER AT DERBY, KS

LOCATION.--Lat 37°32'34", long 97°16'31", in SE¼SW¼NW¼ sec.12, T.29 S., R.1 E., Sedgwick County, Hydrologic Unit 11030013, at highway bridge on the west edge of Derby, 0.9 mi (1.4 km) below mouth of bypass channel, and at mile 749.5 (1,205.9 km).

DRAINAGE AREA.--40,830 mi² (105,750 km²), of which 7,263 mi² (18,810 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,229.95 ft (374.889 m) above mean sea level (City of Wichita bench mark).

REMARKS.--Records good. Flow moderately regulated by John Martin Reservoir (see sta 07130000). Low flow regulated by City of Wichita low-water dam. Diversions above station for irrigation.

AVERAGE DISCHARGE.--9 years, 1,374 ft³/s (38.91 m³/s), 995,500 acre-ft/yr (1.23 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,800 ft³/s (1,300 m³/s) Oct. 1, 1973, gage height, 15.51 ft (4.727 m); minimum, 105 ft³/s (2.97 m³/s) Aug. 23, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	0600	4,580	130	6.55	1.996	July 4	1400	6,060	172	7.42	2.262
May 23	0700	8,780	249	8.71	2.655	Aug. 11	0900	5,270	149	6.98	2.128
May 30	2100	4,070	115	6.23	1.899	Aug. 12	0900	8,100	229	8.44	2.573
June 22	0800	10,800	306	9.50	2.896	Sept. 2	1900	10,800	306	9.50	2.896
June 23	1300	*12,200	346	10.06	3.066	Sept. 14	1600	5,480	155	7.10	2.164

Minimum discharge, 106 ft³/s (3.00 m³/s) Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	576	290	189	177	277	267	260	334	3300	2650	1190	5720
2	494	278	204	180	293	274	244	363	2570	1820	753	9980
3	425	262	230	189	321	330	260	393	2270	1980	599	7000
4	385	254	250	195	327	281	365	481	2210	5760	974	5000
5	385	258	242	186	379	274	300	348	1900	5660	1540	4000
6	335	262	258	198	355	266	288	388	1430	3960	2910	3500
7	315	254	214	207	348	264	270	335	1070	1780	2270	3000
8	290	250	195	214	352	257	250	322	847	1730	1150	2120
9	278	254	214	168	336	246	241	309	719	1030	741	1590
10	266	242	290	160	329	246	240	293	619	848	667	1270
11	262	242	218	174	328	279	246	260	541	760	3020	1230
12	254	234	210	180	322	257	240	284	575	717	6980	996
13	246	230	262	174	295	277	672	276	565	677	3840	1300
14	238	230	290	189	297	274	579	284	509	626	2190	4150
15	222	234	274	198	285	262	360	427	464	581	1280	4140
16	201	234	266	174	278	260	569	428	455	543	899	3960
17	195	234	270	160	296	263	626	596	463	494	1230	4160
18	195	234	270	140	296	264	421	386	432	467	976	3020
19	198	238	262	198	282	242	472	376	528	448	1180	1670
20	201	234	250	201	272	218	511	590	941	429	1370	1230
21	207	226	214	207	282	219	452	3170	5120	416	812	1030
22	204	226	201	218	281	218	390	3880	7990	475	711	910
23	214	226	234	242	299	215	373	7430	10400	767	1280	844
24	198	230	238	266	291	208	348	5370	8250	1550	1800	758
25	201	226	266	263	289	207	335	2860	7610	836	1780	708
26	210	218	282	292	282	220	332	1530	8630	817	1660	677
27	305	204	286	335	274	271	343	1180	8140	519	1160	656
28	266	162	278	257	272	1050	337	1190	7010	426	1000	631
29	290	165	270	231	---	350	331	1050	5620	406	1500	668
30	494	171	234	254	---	331	436	1810	3970	389	2980	845
31	295	---	144	254	---	281	---	3020	---	509	3550	---
TOTAL	8845	7002	7505	6481	8538	8871	11091	39963	95128	40068	53992	76763
MEAN	285	233	242	209	305	286	370	1289	3171	1293	1742	2559
MAX	576	290	290	335	379	1050	672	7430	10400	5760	6980	9980
MIN	195	162	144	140	272	207	240	260	432	389	599	631
AC-FT	17540	13890	14890	12860	16940	17600	22000	79270	188700	79470	107100	152300

CAL YR 1976 TOTAL 292667 MEAN 800 MAX 14700 MIN 144 AC-FT 580500
WTR YR 1977 TOTAL 364247 MEAN 998 MAX 10400 MIN 140 AC-FT 722500

07144550 ARKANSAS RIVER AT DERBY, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year. Prior to October 1968, published as 07144550 Arkansas River below Wichita.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to September 1976.
WATER TEMPERATURES: October 1970 to September 1973, October 1974 to September 1976.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
OCT										
04...	390	1530	7.7	18.5	80	8.9	30	42000	91	16
NOV										
03...	280	2000	7.6	14.0	15	11.4	34	3300	69	11
DEC										
06...	292	2400	7.8	3.5	20	13.2	24	34000	94	22
JAN										
12...	118	2060	7.5	3.0	20	10.0	150	>300000	93	22
FEB										
01...	316	2600	7.7	4.0	20	12.8	63	520000	110	23
MAR										
01...	280	2630	8.1	8.5	9	11.9	17	100000	92	24
APR										
05...	334	2460	8.0	12.5	45	12.2	54	90000	100	21
MAY										
03...	388	2670	8.3	27.0	10	12.4	87	90000	140	23
JUN										
08...	762	1570	8.0	26.5	70	8.6	60	43000	69	14
JUL										
06...	3600	447	7.5	28.5	130	6.6	78	39000	29	6.8
AUG										
02...	750	1060	7.5	30.0	140	5.8	60	66000	56	14
SEP										
12...	275	1320	7.7	25.0	45	8.7	33	37000	75	14

DATE	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
OCT										
04...	210	9.5	260	0	213	8.3	110	290	856	1.16
NOV										
03...	150	3.7	260	0	213	10	160	440	1160	1.58
DEC										
06...	400	6.8	270	0	221	6.8	180	510	1370	1.86
JAN										
12...	270	9.0	340	0	279	17	140	350	1090	1.48
FEB										
01...	410	7.0	300	0	246	9.6	160	580	1460	1.99
MAR										
01...	420	7.7	280	0	230	3.6	180	620	1480	2.01
APR										
05...	390	7.8	280	0	230	4.5	150	560	1350	1.84
MAY										
03...	430	8.2	220	0	180	1.8	150	520	1420	1.93
JUN										
08...	220	11	160	0	131	2.6	94	320	849	1.15
JUL										
06...	60	11	68	0	56	3.4	24	82	259	.35
AUG										
02...	170	9.9	100	0	82	5.1	76	230	605	.82
SEP										
12...	170	7.7	180	0	148	5.7	100	280	773	1.05

07144550 ARKANSAS RIVER AT DERBY, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL RESI-DUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
OCT									
04...	901	1070	1.6	2.3	1.8	4.1	5.7	25	1.7
NOV									
03...	877	1170	2.9	.81	2.4	3.2	6.1	27	1.7
DEC									
06...	1080	1400	1.3	1.4	.20	1.6	2.9	13	1.3
JAN									
12...	347	1150	.09	13	6.0	19	19	85	4.3
FEB									
01...	1250	1550	1.1	4.9	.00	2.4	3.5	16	2.2
MAR									
01...	1120	1520	.47	3.5	.90	4.4	4.9	22	1.6
APR									
05...	1220	1500	.79	3.2	1.5	4.7	5.5	24	1.6
MAY									
03...	1490	1760	.29	.93	3.0	3.9	4.2	19	1.3
JUN									
08...	1750	1030	.66	1.1	2.7	3.8	4.5	20	1.0
JUL									
06...	2520	604	.38	.41	1.9	2.3	2.7	12	.68
AUG									
02...	1230	1110	.62	.42	2.6	3.0	3.6	16	.87
SEP									
12...	574	888	1.4	1.4	.50	1.9	3.3	15	4.4

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS

LOCATION.--Lat 37°50'41", long 97°56'09", in SW¼NE¼SW¼ sec.25, T.25 S., R.6 W., Reno County, Hydrologic Unit 11030014, at downstream side of bridge on State Highway 17, 12 mi (19.3 km) south of Hutchinson, 12.5 mi (20.1 km) upstream from Cheney Dam, and at mile 28.2 (45.4 km).

DRAINAGE AREA.--787 mi² (2,040 km²), of which 237 mi² (614 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,431.75 ft (436.397 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--12 years, 130 ft³/s (3.682 m³/s), 94,180 acre-ft/yr (116 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,000 ft³/s (1,220 m³/s) Apr. 20, 1974, gage height, 10.80 ft (3.292 m); no flow July 14, 1966, part of day Aug. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	0700	3,340	94.6	7.43	2.264	Aug. 23	0700	1,840	52.1	5.94	1.810
May 23	1600	4,150	118	7.95	2.423	Aug. 28	2100	4,450	126	8.10	2.469
June 2	0200	2,140	60.6	6.24	1.902	Sept. 1	1700	*12,700	360	9.87	3.008
June 25	1500	3,990	113	7.86	2.396	Sept. 13	0700	10,700	303	9.63	2.935
Aug. 11	0800	1,450	41.1	5.55	1.692						

Minimum discharge 23 ft³/s (0.65 m³/s) Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	60	46	37	66	62	97	105	524	119	38	7280
2	37	55	48	39	68	65	93	117	1190	105	41	4570
3	35	53	50	41	70	75	86	114	365	96	38	1340
4	34	50	54	42	70	79	87	130	207	85	38	644
5	33	48	54	41	72	77	94	115	153	77	38	450
6	30	48	53	40	74	74	93	93	132	70	38	365
7	33	44	47	36	76	72	86	82	119	65	107	305
8	34	44	48	35	79	68	79	75	107	72	123	250
9	34	44	50	35	79	68	77	73	100	72	88	218
10	34	44	52	35	77	66	72	69	92	66	71	195
11	32	44	50	36	78	112	66	66	86	59	672	178
12	31	44	52	37	78	80	64	61	90	54	265	237
13	28	46	58	38	77	75	83	60	89	53	165	7640
14	27	48	63	39	74	73	109	60	88	49	124	2160
15	24	48	57	42	72	68	105	57	85	44	96	824
16	23	48	55	43	72	62	100	61	80	41	80	380
17	25	50	53	44	72	60	111	87	76	38	71	280
18	28	52	52	46	70	60	240	83	75	33	65	214
19	30	50	51	48	68	57	233	72	85	31	66	172
20	30	48	51	52	66	55	187	114	107	29	67	153
21	31	48	47	56	65	54	187	2700	89	28	65	143
22	32	48	44	60	64	54	173	968	456	36	75	132
23	33	48	44	64	63	53	171	3170	214	51	1020	126
24	32	48	44	70	66	53	153	1760	409	50	295	124
25	32	50	47	74	64	53	135	612	2780	42	153	119
26	38	53	52	78	62	53	120	345	1280	43	112	114
27	50	50	58	80	62	54	114	246	395	44	92	112
28	55	47	54	72	62	85	109	380	226	44	2160	109
29	58	45	57	68	---	151	105	300	162	44	2780	109
30	61	45	48	66	---	130	103	222	137	44	996	109
31	61	---	41	66	---	108	---	375	---	43	828	---
TOTAL	1103	1450	1580	1560	1966	2256	3532	12772	9998	1727	10867	29052
MEAN	35.6	48.3	51.0	50.3	70.2	72.8	118	412	333	55.7	351	968
MAX	61	60	63	80	79	151	240	3170	2780	119	2780	7640
MIN	23	44	41	35	62	53	64	57	75	28	38	109
AC-FT	2190	2880	3130	3090	3900	4470	7010	25330	19830	3430	21550	57620

CAL YR 1976 TOTAL 42584.1 MEAN 116 MAX 6760 MIN 6.6 AC-FT 84470
WTR YR 1977 TOTAL 77863.0 MEAN 213 MAX 7640 MIN 23 AC-FT 154400

07144780 NORTH FORK NINNESCAH RIVER ABOVE CHENEY RESERVOIR, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT					
01...	1140	38	1170	133	14
14...	1205	25	1270	23	1.6
FEB					
16...	1550	72	1370	31	6.0
MAR					
24...	1545	52	1270	45	6.4
APR					
08...	0920	78	--	101	21
22...	1130	173	1140	161	75
MAY					
17...	1350	80	860	184	40
JUN					
02...	1120	1060	540	346	990
16...	1100	80	1170	138	30
27...	1125	394	760	170	181
AUG					
23...	1040	1320	360	1120	3990
SEP					
01...	1830	12500	152	1920	64800
16...	1115	360	810	195	200

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
OCT											
14...	1205	8	23	2	4	12	44	79	91	98	100
APR											
08...	0920	9	101	--	0	4	47	88	96	99	100

07144790 CHENEY RESERVOIR NEAR CHENEY, KS

LOCATION.--Lat 37°43'34", long 97°47'38", in NW¼NE¼SE¼ sec.6, T.27 S., R.4 W., Sedgwick County, Hydrologic Unit 11030014, in control-house structure at outlet works of Cheney Dam on North Fork Ninnescah River, 6 mi (9.7 km) north of Cheney, and at mile 15.9 (25.6 km).

DRAINAGE AREA.--901 mi² (2,334 km²), of which 237 mi² (614 km²) is probably noncontributing.

ELEVATION RECORDS

PERIOD OF RECORD.--November 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Nov. 17, 1964. Total capacity, 566,300 acre-ft (698 hm³), consisting of the following: Dead storage, 979 acre-ft (1.21 hm³) below elevation 1,378.5 ft (420.17 m); fish and wildlife storage, 14,310 acre-ft (17.6 hm³) between elevations 1,378.5 ft (420.17 m) and 1,392.9 ft (424.56 m); conservation pool, 151,800 acre-ft (187 hm³) between elevations 1,392.9 ft (424.56 m) and 1,421.6 ft (433.30 m); flood control pool, 80,860 acre-ft (99.7 hm³) between elevations 1,421.6 ft (433.30 m) and 1,429.0 ft (435.56 m), crest of uncontrolled spillway; and uncontrolled storage, 318,300 acre-ft (392 hm³) between elevations 1,429.0 ft (435.56 m) and 1,447.8 ft (441.29 m). Reservoir is used for supplemental water supply for municipal and industrial uses in the city of Wichita, fish and wildlife conservation, flood control, and recreational purposes in Cheney Division, Wichita project. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,429.00 ft (435.559 m) Oct. 14, 1973, contents, 247,900 acre-ft (306 hm³); minimum since conservation pool was first filled, 1,412.33 ft (430.478 m) Dec. 2-4, 1971, contents, 93,300 acre-ft (115 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,424.97 ft (434.331 m) Sept. 3, 4, contents, 201,200 acre-ft (248 hm³); minimum, 1,420.02 ft (432.822 m) Oct. 22, 23, contents, 152,400 acre-ft (188 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by U.S. Bureau of Reclamation computed in 1965)

1,419	143,400	1,423	180,700
1,421	161,400	1,425	201,600

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1420.40	1420.19	1420.16	1420.20	1420.41	1420.62	1420.84	1421.61	1423.17	1421.75	1421.40	1424.11
2	1420.40	1420.23	1420.15	1420.20	1420.44	1420.67	1420.87	1421.62	1423.10	1421.72	1421.40	1424.87
3	1420.35	1420.23	1420.17	1420.20	1420.45	1420.70	1420.95	1421.65	1422.90	1421.72	1421.37	1424.97
4	1420.40	1420.22	1420.17	1420.22	1420.50	1420.69	1420.98	1421.67	1422.66	1421.68	1421.34	1424.91
5	1420.34	1420.19	1420.24	1420.22	1420.50	1420.68	1420.91	1421.70	1422.39	1421.67	1421.36	1424.80
6	1420.30	1420.21	1420.16	1420.22	1420.50	1420.67	1420.92	1421.70	1422.11	1421.66	1421.35	1424.67
7	1420.31	1420.21	1420.16	1420.23	1420.51	1420.67	1420.92	1421.71	1421.92	1421.65	1421.32	1424.44
8	1420.24	1420.18	1420.13	1420.26	1420.52	1420.67	1420.92	1421.72	1421.84	1421.72	1421.32	1424.14
9	1420.29	1420.19	1420.15	1420.25	1420.54	1420.67	1420.90	1421.72	1421.78	1421.72	1421.32	1423.89
10	1420.28	1420.19	1420.16	1420.25	1420.55	1420.64	1420.90	1421.70	1421.68	1421.67	1421.33	1423.63
11	1420.25	1420.22	1420.16	1420.25	1420.58	1420.75	1420.90	1421.68	1421.63	1421.68	1421.59	1423.37
12	1420.25	1420.19	1420.17	1420.25	1420.61	1420.76	1420.92	1421.67	1421.62	1421.68	1421.64	1423.20
13	1420.25	1420.17	1420.15	1420.25	1420.61	1420.73	1421.01	1421.63	1421.62	1421.62	1421.67	1424.16
14	1420.24	1420.16	1420.17	1420.25	1420.61	1420.75	1421.04	1421.62	1421.62	1421.60	1421.70	1424.25
15	1420.22	1420.15	1420.17	1420.27	1420.61	1420.77	1421.07	1421.62	1421.60	1421.57	1421.69	1424.12
16	1420.18	1420.15	1420.18	1420.27	1420.61	1420.71	1421.13	1421.64	1421.58	1421.57	1421.73	1423.93
17	1420.12	1420.15	1420.18	1420.33	1420.65	1420.80	1421.20	1421.67	1421.58	1421.53	1421.75	1423.74
18	1420.20	1420.15	1420.19	1420.28	1420.66	1420.75	1421.28	1421.67	1421.59	1421.50	1421.72	1423.46
19	1420.13	1420.15	1420.27	1420.30	1420.64	1420.77	1421.34	1421.74	1421.62	1421.45	1421.78	1423.23
20	1420.10	1420.17	1420.20	1420.30	1420.64	1420.78	1421.48	1422.02	1421.68	1421.44	1421.80	1422.96
21	1420.10	1420.18	1420.18	1420.30	1420.63	1420.75	1421.47	1422.40	1421.70	1421.44	1421.81	1422.75
22	1420.03	1420.14	1420.18	1420.30	1420.65	1420.73	1421.48	1423.05	1421.80	1421.45	1421.90	1422.45
23	1420.07	1420.16	1420.15	1420.30	1420.65	1420.73	1421.50	1423.64	1421.87	1421.45	1422.15	1422.34
24	1420.04	1420.16	1420.20	1420.33	1420.66	1420.66	1421.53	1423.95	1421.98	1421.44	1422.16	1422.12
25	1420.06	1420.15	1420.20	1420.34	1420.69	1420.67	1421.53	1424.00	1422.42	1421.42	1422.12	1421.96
26	1420.08	1420.17	1420.20	1420.35	1420.67	1420.72	1421.53	1423.96	1422.64	1421.45	1422.02	1421.82
27	1420.09	1420.18	1420.20	1420.36	1420.67	1420.73	1421.52	1423.83	1422.64	1421.42	1421.96	1421.70
28	1420.09	1420.16	1420.22	1420.40	1420.67	1420.87	1421.56	1423.72	1422.44	1421.41	1422.28	1421.63
29	1420.14	1420.15	1420.21	1420.40	---	1420.85	1421.59	1423.60	1422.11	1421.41	1422.63	1421.62
30	1420.19	1420.13	1420.21	1420.40	---	1420.88	1421.60	1423.43	1421.90	1421.42	1422.62	1421.65
31	1420.19	---	1420.20	1420.40	---	1420.84	---	1423.22	---	1421.42	1422.56	---
MEAN	1420.21	1420.18	1420.18	1420.29	1420.59	1420.73	1421.19	1422.35	1422.04	1421.56	1421.77	1423.36
MAX	1420.40	1420.23	1420.27	1420.40	1420.69	1420.88	1421.60	1424.00	1423.17	1421.75	1422.63	1424.97
MIN	1420.03	1420.13	1420.13	1420.20	1420.41	1420.62	1420.84	1421.61	1421.58	1421.41	1421.32	1421.62
(+)	154,000	153,400	154,000	155,900	158,400	159,900	167,100	183,000	169,900	165,400	176,400	167,500
(‡)	-1,900	-600	+600	+1,900	+2,500	+1,500	+7,200	+15,900	-13,100	-4,500	+11,000	-8,900

CAL YR 1976 .... (‡) -4,700
WTR YR 1977 .... (‡) +11,600

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

07144795 NORTH FORK NINNESCAH RIVER AT CHENEY DAM, KS

LOCATION.--Lat 37°43'17", long 97°47'39", in NE¼SW¼SE¼ sec.6, T.27 S., R.4 W., Sedgwick County, Hydrologic Unit 11030014, 1,400 ft (427 m) downstream from Cheney Dam, 6.0 mi (9.7 km) north of Cheney, and at mile 15.5 (24.9 km).

DRAINAGE AREA.--901 mi^2 (2,330 km^2), of which 237 mi^2 (614 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and concrete Parshall flume. Datum of gage is 1,366.022 ft (416.364 m) above mean sea level (Bureau of Reclamation bench mark). Prior to Oct. 1, 1973, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Flow completely regulated by Cheney Reservoir 1,400 ft (427 m) upstream (see sta 07144790).

AVERAGE DISCHARGE.--13 years, 95.7 ft^3/s (2.710 m^3/s), 69,330 acre-ft/yr (85.5 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,960 ft^3/s (55.5 m^3/s) Apr. 29, 30, 1969, gage height, 5.45 ft (1.661 m); maximum observed gage height, 5.92 ft (1.804 m) Oct. 23, 1973; no flow at times in 1966, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,680 ft^3/s (47.6 m^3/s) June 1, gage height, 5.04 ft (1.536 m); minimum daily, 0.01 ft^3/s (<0.001 m^3/s) Jan. 9-12, during ice period.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	.21	.30	.12	.26	.17	.48	.31	1500	815	1.5	394
2	.26	.19	.32	.11	.26	.18	.44	.35	1640	1.8	1.6	1.7
3	.28	.18	.32	.10	.27	.17	.48	.35	1630	.84	1.5	445
4	.27	.19	.30	.09	.27	.19	.48	.43	1620	.79	1.6	892
5	.22	.20	.28	.08	.30	.19	.43	.35	1600	.79	1.6	880
6	.23	.20	.28	.06	.25	.19	.45	.37	1580	.81	1.5	869
7	.25	.20	.28	.04	.25	.19	.48	.34	1130	.85	1.5	1300
8	.23	.24	.30	.02	.26	.18	.44	.30	510	1.0	1.5	1470
9	.19	.24	.33	.01	.27	.17	.39	.29	388	.90	1.5	1440
10	.19	.26	.47	.01	.28	.21	.41	.36	388	.93	1.8	1410
11	.20	.27	.41	.01	28	.21	.38	.34	388	.94	2.9	1380
12	.20	.33	.34	.01	.25	.18	.38	.36	118	1.0	1.9	1370
13	.20	.29	.27	.02	.25	.20	.61	.36	1.0	1.0	1.8	1340
14	.22	.31	.28	.04	.23	.26	.42	.36	.84	1.1	1.8	1340
15	.24	.32	.28	.08	.24	.25	.38	.43	.90	2.0	1.8	1330
16	.23	.30	.24	.12	.24	.20	.44	.47	.90	1.6	1.7	1330
17	.27	.29	.24	.15	.24	.21	.55	.56	.90	1.5	2.1	1300
18	.28	.29	.27	.20	.22	.25	.53	.45	1.0	1.6	1.9	1290
19	.28	.28	.24	.28	.20	.34	.44	.62	1.1	2.2	2.6	1280
20	.29	.28	.27	.38	.20	.31	.73	1.0	1.4	1.9	2.1	1280
21	.30	.27	.29	.39	.23	.28	.49	1.6	1.1	1.9	2.1	1270
22	.32	.28	.29	.29	.23	.27	.35	1.1	1.1	2.0	2.3	1250
23	.30	.28	.28	.28	.24	.29	.31	1.2	1.1	2.0	270	964
24	.24	.28	.27	.28	.20	.31	.33	.57	1.1	1.9	406	781
25	.23	.29	.25	.25	.20	.34	.31	373	1.4	1.7	406	781
26	.35	.33	.24	.25	.15	.36	.36	836	1.1	2.1	406	781
27	.36	.30	.21	.26	.16	.35	.38	1100	424	1.7	406	530
28	.28	.29	.31	.25	.17	.67	.40	1250	1370	1.6	397	362
29	.38	.28	.40	.25	---	.41	.46	1230	1540	1.5	748	132
30	.38	.29	.20	.26	---	.39	.44	1200	1500	1.[illegible]	916	.45
31	.20	---	.13	.25	---	.40	---	1180	---	1.7	904	---
TOTAL	8.13	7.96	8.89	4.94	6.60	8.32	13.17	7181.87	17340.94	858.25	4899.6	29193.15
MEAN	.26	.27	.29	.16	.24	.27	.44	232	578	27.7	158	973
MAX	.38	.33	.47	.39	.30	.67	.73	1250	1640	815	916	1470
MIN	.19	.18	.13	.01	.15	.17	.31	.29	.84	.79	1.5	.45
AC-FT	16	16	18	9.8	13	17	26	14250	34400	1700	9720	57900

CAL YR 1976 TOTAL 29526.41 MEAN 80.7 MAX 1620 MIN .06 AC-FT 58570
WTR YR 1977 TOTAL 59531.82 MEAN 163 MAX 1640 MIN .01 AC-FT 118100

07144850 SOUTH FORK SOUTH FORK NINNESCAH RIVER NEAR PRATT, KS

LOCATION.--Lat 37°35'10", long 98°49'40", in NW¼NW¼ sec.26, T.28 S., R.14 W., Pratt County, Hydrologic Unit 11030015, at downstream side of highway bridge, 6.0 mi (9.7 km) southwest of Pratt, and 6.5 mi (10.5 km) upstream from mouth.

DRAINAGE AREA.--21 mi² (54 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,920 ft (585 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--16 years, 2.74 ft³/s (0.078 m³/s), 1,990 acre-ft/yr (2.45 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft³/s (200 m³/s) Apr. 20, 1974, gage height, 10.05 ft (3.063 m); no flow for most days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 23	0200	*508	14.4	4.77	1.454	Aug. 28	0800	470	13.3	4.67	1.423
Aug. 23	0300	122	3.46	3.50	1.067	Sept. 13	0300	200	5.66	3.82	1.164

Minimum discharge, no flow for most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	13	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.57	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.6
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	50
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.4
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.88	.00
23	.00	.00	.00	.00	.00	.00	.00	144	.00	.00	36	.00
24	.00	.00	.00	.00	.00	.00	.00	25	.00	.00	9.5	.00
25	.00	.00	.00	.00	.00	.00	.00	3.2	.00	.00	.40	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	6.8	.00	.00	148	.00
29	.00	.00	.00	.00	---	.00	.00	.81	.00	.00	40	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	8.0	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	1.3	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	191.81	.00	.00	258.65	55.00
MEAN	.000	.000	.000	.000	.000	.000	.000	6.19	.000	.000	8.34	1.83
MAX	.00	.00	.00	.00	.00	.00	.00	144	.00	.00	148	50
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	380	.00	.00	513	109

CAL YR 1976 TOTAL 1625.89 MEAN 4.44 MAX 625 MIN .00 AC-FT 3220
WTR YR 1977 TOTAL 505.46 MEAN 1.38 MAX 148 MIN .00 AC-FT 1000

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY				
23...	1245	54	1200	176

07145200 SOUTH FORK NINNESCAH RIVER NEAR MURDOCK, KS

LOCATION.--Lat 37°33'51", long 97°51'10", in SW¼SW¼SE¼ sec.34, T.28 S., R.5 W., Kingman County, Hydrologic Unit 11030015, near right bank on downstream side of pier of county highway bridge, 4.0 mi (6.4 km) southeast of Murdock, and at mile 68.0 (109.4 km).

DRAINAGE AREA.--650 mi² (1,680 km²), of which 107 mi² (277 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1950 to September 1959. Annual maximums, water years 1960-64. June 1964 to current year.

REVISED RECORDS.--WSP 1561: 1957(P).

GAGE.--Water-stage recorder. Datum of gage is 1,357.81 ft (413.860 m) above mean sea level (Corps of Engineers bench mark). Prior to Mar. 30, 1951, nonrecording gage, Mar. 30, 1951, to Sept. 30, 1959, water-stage recorder, and Oct. 1, 1959 to June 3, 1964, crest-stage gage, at same site and datum.

REMARKS.--Records good except those for winter months, which are poor.

AVERAGE DISCHARGE.--22 years (water years 1951-59, 1965-77), 198 ft³/s (5.607 m³/s), 143,500 acre-ft/yr (177 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,900 ft³/s (733 m³/s) June 26, 1957, gage height, 11.87 ft (3.618 m); maximum gage height, 11.93 ft (3.636 m) Oct. 11, 1973; minimum discharge, 5.0 ft³/s (0.14 m³/s) Aug. 5, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	0700	4,480	127	7.85	2.393	Aug. 29	0600	5,130	145	8.11	2.472
May 23	0700	*10,800	306	9.69	2.954	Sept. 1	1700	7,200	204	8.77	2.673
Aug. 23	0900	2,180	61.7	6.69	2.039						

Minimum discharge, 66 ft³/s (1.87 m³/s) July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	164	110	80	128	127	151	245	292	127	121	4050
2	94	154	115	78	122	127	157	240	894	121	124	2280
3	94	154	125	76	120	139	157	235	484	109	133	707
4	94	142	130	74	120	148	164	230	240	88	127	444
5	94	130	139	72	120	142	164	225	188	97	118	338
6	94	127	139	72	120	145	157	220	172	94	118	268
7	97	127	142	72	120	142	148	215	160	97	154	196
8	94	124	135	72	122	139	130	205	152	139	100	180
9	97	121	132	73	124	136	118	192	148	180	79	160
10	88	121	130	74	124	133	136	176	142	133	82	154
11	79	118	128	76	130	164	121	172	140	112	139	154
12	79	118	130	78	136	192	115	164	135	106	215	154
13	76	112	130	80	133	154	124	160	130	106	215	373
14	76	118	132	82	124	145	154	157	128	103	365	1330
15	76	118	136	84	115	136	140	154	126	97	188	650
16	76	121	133	88	142	130	184	148	126	94	130	484
17	79	121	133	90	151	133	188	154	125	88	286	338
18	91	121	136	94	148	133	697	164	123	82	200	262
19	103	121	139	100	151	133	810	145	121	76	240	220
20	106	124	145	110	151	124	720	176	120	91	180	200
21	115	130	90	115	142	136	660	2820	120	79	133	184
22	112	130	100	130	139	133	621	1090	118	106	118	175
23	112	136	110	140	148	130	585	5450	150	136	1030	165
24	115	142	120	150	145	127	540	2070	640	121	524	160
25	118	142	130	165	139	130	492	1170	300	112	250	155
26	127	148	139	180	136	133	420	602	200	121	172	150
27	148	130	133	160	133	136	373	412	150	180	151	145
28	154	110	124	150	133	188	338	436	130	157	545	140
29	160	100	118	140	---	235	292	304	128	148	3520	139
30	172	105	100	135	---	192	262	268	127	148	1190	145
31	168	---	90	130	---	157	---	304	---	151	610	---
TOTAL	3282	3829	3893	3220	3716	4519	9358	18703	6209	3599	11537	14500
MEAN	106	128	126	104	133	146	312	603	207	116	372	483
MAX	172	164	145	180	151	235	810	5450	894	180	3520	4050
MIN	76	100	90	72	115	124	115	145	118	76	79	139
AC-FT	6510	7590	7720	6390	7370	8960	18560	37100	12320	7140	22880	28760

CAL YR 1976 TOTAL 66172 MEAN 181 MAX 4080 MIN 47 AC-FT 131300
WTR YR 1977 TOTAL 86365 MEAN 237 MAX 5450 MIN 72 AC-FT 171300

07145200 SOUTH FORK NINNESCAH RIVER NEAR MURDOCK, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT					
14...	0900	75	1630	51	10
DEC					
29...	1455	115	1260	60	19
MAY					
18...	1145	167	980	370	167
AUG					
19...	1315	303	690	1150	941

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
OCT										
14...	0900	8	51	0	7	63	95	99	100	--
JUN										
30...	1100	300	--	0	10	64	88	96	99	100

07145500 NINNESCAH RIVER NEAR PECK, KS

LOCATION.--Lat 37°27'34", long 97°25'20", in NW¼SW¼NW¼ sec.10, T.30 S., R.1 W., Sumner County, Hydrologic Unit 11030016, at downstream side of highway bridge, 3.0 mi (4.8 km) southwest of Peck, and at mile 31.6 (50.8 km).

DRAINAGE AREA.--2,129 mi² (5,514 km²), of which 344 mi² (891 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year. Prior to April 1938 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1211: 1944(M). WSP 1241: 1944, 1945(M), 1947-48(M).

GAGE.--Water-stage recorder. Datum of gage is 1,222.38 ft (372.581 m) above mean sea level (levels by Corps of Engineers). Prior to Feb. 4, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter periods, which are poor. Flow partially regulated by Cheney Reservoir since 1964 (see sta 07144790).

AVERAGE DISCHARGE.--40 years, 505 ft³/s (14.30 m³/s), 365,900 acre-ft/yr (451 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,200 ft³/s (1,080 m³/s) May 17, 1957, gage height, 21.85 ft (6.660 m); minimum daily, 0.20 ft³/s (0.0057 m³/s) Sept. 3, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 26.4 ft (8.047 m) June 9, 1923, from floodmark, discharge, about 70,000 ft³/s (2,000 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 22	0500	7,040	199	12.02	3.664	Aug. 23	2000	5,990	170	11.06	3.371
May 24	0200	12,500	354	15.62	4.761	Aug. 29	2200	4,390	124	9.46	2.883
May 30	2300	3,950	112	8.96	2.731	Sept. 2	0400	*26,600	753	19.74	6.017
Aug. 17	2400	4,060	115	9.08	2.768						

Minimum discharge, 66 ft³/s (1.87 m³/s) Oct. 15, 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	151	143	115	150	139	197	206	1900	1620	366	10700
2	81	138	168	110	150	140	186	198	2000	969	230	19000
3	79	128	164	105	150	144	177	198	2690	327	198	3120
4	75	123	170	100	150	145	177	195	2170	234	180	2130
5	75	121	168	98	150	152	175	192	1940	194	184	2050
6	77	121	154	96	150	151	175	198	1850	168	170	1830
7	82	121	137	95	150	146	174	189	1800	156	145	1670
8	87	121	113	94	155	144	165	179	1330	369	172	1920
9	87	120	105	93	158	139	154	168	802	491	137	2010
10	85	119	100	92	158	137	145	158	636	283	117	1960
11	80	118	95	92	156	137	163	154	593	216	1150	1940
12	74	114	99	94	156	151	155	146	576	172	1220	1910
13	72	117	180	96	154	187	166	141	425	152	501	2100
14	70	121	178	98	154	162	218	141	305	136	535	2670
15	70	124	162	100	149	145	254	144	267	129	434	2710
16	67	127	151	105	147	140	244	139	228	121	311	2430
17	67	128	146	110	151	136	282	144	208	109	1990	2510
18	70	128	142	120	146	133	278	189	193	97	2090	2100
19	75	127	142	125	143	129	619	231	183	90	1600	1950
20	79	125	137	130	139	127	491	233	175	81	2050	1870
21	84	125	101	140	139	124	377	3450	228	80	718	1820
22	87	123	90	150	137	121	358	4730	276	228	452	1780
23	92	125	100	160	139	121	323	6860	218	218	4460	1750
24	94	127	110	170	141	118	291	6730	209	166	2890	1350
25	90	127	120	180	146	115	261	2360	1260	135	1370	1180
26	92	127	130	180	143	118	234	1540	1030	124	942	1150
27	111	123	140	170	139	123	214	1560	594	251	785	1140
28	126	87	155	165	140	240	203	1950	607	226	1570	811
29	136	104	147	160	---	247	200	2590	1410	187	3150	628
30	154	104	135	155	---	264	203	2360	1620	167	3070	456
31	156	---	125	150	---	227	---	2640	---	396	1970	---
TOTAL	2759	3664	4207	3848	4140	4702	7259	40313	27723	8292	35157	81145
MEAN	89.0	122	136	124	148	152	242	1300	924	267	1134	2705
MAX	156	151	180	180	158	264	619	6860	2690	1620	4460	19000
MIN	67	87	90	92	137	115	145	139	175	80	117	456
AC-FT	5470	7270	8340	7630	8210	9330	14400	79960	54990	16450	69730	161000

CAL YR 1976 TOTAL 112634 MEAN 308 MAX 6090 MIN 35 AC-FT 223400
WTR YR 1977 TOTAL 223209 MEAN 612 MAX 19000 MIN 67 AC-FT 442700

07145500 NINNESCAH RIVER NEAR PECK, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT					
05...	1340	77	15	76	16
APR					
19...	1400	781	1400	1280	2700
MAY					
22...	1445	3440	290	608	5650

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
APR								
19...	1400	781	1280	45	54	78	98	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM
OCT										
05...	1340	11	76	--	0	6	80	97	99	100
JUL										
19...	1230	10	--	1	1	6	55	94	99	100

07145700 SLATE CREEK AT WELLINGTON, KS

LOCATION.--Lat 37°15'00", long 97°24'12", in SE¼NE¼SE¼ sec.22, T.32 S., R.1 W., Sumner County, Hydrologic Unit 11030013, on right bank at upstream side of U.S. Highway 81 bridge, at southern edge of Wellington.

DRAINAGE AREA.--154 mi^2 (399 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1954-66. Annual maximum, water years 1960-69. April 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,157.24 ft (352.727 m) above mean sea level. Prior to Apr. 1, 1969, crest-stage gage at present site and at datum 3.0 ft (0.91 m) higher.

REMARKS.--Records fair except those for October to January, which are poor.

AVERAGE DISCHARGE.--8 years (water years 1970-77), 67.6 ft^3/s (1.914 m^3/s), 48,980 acre-ft/yr (60.4 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,500 ft^3/s (807 m^3/s) June 17, 1975, gage height, 25.82 ft (7.870 m), from rating curve extended above 18,000 ft^3/s (510 m^3/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
May 23	unknown	2,570	72.8	[a]18.88	5.755	Aug. 23	1800	* 4,390	124	[a]21.2	6.46
May 29	0500	1,910	54.1	[a]17.18	5.236	Aug. 28	1900	1,010	28.6	[a]13.2	4.02
May 30	2100	1,450	41.1	[a]15.38	4.689	Sept. 2	1200	2,220	62.9	18.09	5.514
Aug. 19	1600	3,930	111	20.78	6.334						

[a] from floodmark

Minimum discharge, 0.38 ft^3/s (0.011 m^3/s) July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.81	3.0	2.4	3.0	4.2	3.8	5.3	23	150	4.4	173	39
2	.81	3.0	2.5	2.5	4.2	3.8	4.6	17	48	4.0	40	1420
3	.81	2.9	2.7	2.2	4.5	4.2	4.1	10	28	3.7	66	113
4	.79	2.9	2.8	2.0	4.6	4.7	4.0	8.7	20	3.3	18	38
5	.66	2.8	3.2	2.0	4.5	4.3	3.7	7.9	16	2.9	9.0	26
6	.61	2.8	3.9	2.0	4.4	4.2	3.7	7.7	13	2.6	5.4	21
7	.69	2.7	3.2	2.0	4.2	4.1	3.7	7.7	11	3.2	4.0	17
8	.69	2.7	3.5	2.1	4.4	3.8	3.5	7.7	11	4.9	3.1	14
9	.69	2.7	3.5	2.2	4.8	3.5	3.5	7.7	9.5	3.9	2.3	12
10	.74	2.6	3.5	2.2	4.8	3.7	3.1	7.3	8.3	3.5	2.2	10
11	.81	2.6	3.0	2.3	4.8	4.6	3.0	7.0	7.6	3.1	6.6	18
12	.81	2.6	3.3	2.4	5.3	3.9	3.0	6.3	7.1	2.3	48	19
13	.84	2.6	3.6	2.5	4.8	3.7	20	6.2	6.9	2.0	25	387
14	.73	2.6	3.6	2.6	4.8	3.8	21	6.4	6.9	1.4	11	337
15	.65	2.6	3.8	2.8	4.2	3.7	14	6.3	6.9	1.1	6.8	40
16	.68	2.6	3.9	3.0	4.2	3.4	11	5.9	6.7	1.2	5.0	153
17	.72	2.5	3.9	3.2	4.1	3.6	50	8.3	6.5	.77	465	560
18	.76	2.5	3.9	3.3	3.9	3.6	81	6.2	6.1	.62	1250	40
19	.80	2.5	4.2	3.6	4.0	3.5	38	8.7	5.9	.54	1930	15
20	.88	2.5	3.8	3.9	3.8	2.9	23	52	5.7	.43	2940	9.6
21	.96	2.5	3.6	4.1	4.1	3.3	16	803	5.9	.39	312	7.4
22	1.1	2.5	3.6	4.5	4.4	3.0	14	1180	11	1.2	32	5.7
23	1.2	2.5	3.8	5.0	5.0	2.8	13	1800	12	1.1	2700	4.5
24	1.4	2.4	3.9	5.8	4.1	3.1	11	1800	7.0	1.5	1500	3.9
25	1.6	2.3	4.0	6.0	4.1	3.4	9.3	110	18	1.2	100	3.6
26	1.8	2.3	4.1	5.8	5.4	3.6	8.5	35	25	2.4	50	3.4
27	1.9	2.3	4.4	5.7	4.3	4.2	8.1	25	11	3.0	20	3.4
28	2.0	2.2	4.6	5.0	4.1	49	7.8	25	6.9	4.2	500	23
29	2.3	2.3	4.1	4.2	---	52	11	850	5.4	2.6	300	59
30	2.9	2.4	3.7	4.1	---	13	27	420	4.9	1.5	80	7.5
31	3.0	---	3.3	4.2	---	7.1	---	950	---	25	42	---
TOTAL	35.14	77.4	111.3	106.2	124.0	221.3	428.9	8216.0	488.2	93.95	12646.4	3410.0
MEAN	1.13	2.58	3.59	3.43	4.43	7.14	14.3	265	16.3	3.03	408	114
MAX	3.0	3.0	4.6	6.0	5.4	52	81	1800	150	25	2940	1420
MIN	.61	2.2	2.4	2.0	3.8	2.8	3.0	5.9	4.9	.39	2.2	3.4
AC-FT	70	154	221	211	246	439	851	16300	968	186	25080	6760

CAL YR 1976 TOTAL 17615.01 MEAN 48.1 MAX 4790 MIN .45 AC-FT 34940
WTR YR 1977 TOTAL 25958.79 MEAN 71.1 MAX 2940 MIN .39 AC-FT 51490

07145700 SLATE CREEK AT WELLINGTON, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR					
19...	1615	31	960	102	8.7
JUN					
02...	1140	49	630	170	22
AUG					
30...	1650	59	460	299	48

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS
(National stream-quality accounting network, pesticide and radiochemical station)

LOCATION.--Lat 37°03'23", long 97°03'32", in NE¼NE¼NE¼ sec.35, T.34 S., R.3 E., Cowley County, Hydrologic Unit 11030013, near left bank at downstream side of bridge on U.S. Highway 166, 0.1 mi (0.2 km) downstream from St. Louis - San Francisco Railway Co. bridge, 0.5 mi (0.8 km) west of Arkansas City, 5.4 mi (8.7 km) upstream from Walnut River and at mile 701.4 (1,128.6 km).

DRAINAGE AREA.--43,713 mi² (113,220 km²), of which 7,607 mi² (19,700 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1902 to September 1906, September 1921 to current year. Published as "near Arkansas City" 1903-4. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: 1905. WSP 1341: 1922-23, 1927, 1929, 1931, 1933, 1940, 1945-46(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,050.04 ft (320.052 m) above mean sea level (levels by Corps of Engineers). Sept. 23, 1902, to July 31, 1906, nonrecording gage at site 0.5 mi (0.8 km) upstream at datum 9.5 ft (2.90 m) higher. Sept. 10, 1921, to Sept. 27, 1929, nonrecording gage and Sept. 28, 1929, to Aug. 28, 1956, water-stage recorder at site 0.5 mi (0.8 km) upstream at datum 2.97 ft (0.905 m) higher than present datum.

REMARKS.--Records good except those for winter periods, which are poor. Flow moderately regulated by John Martin Reservoir since 1943 (see sta 07130000) and Cheney Reservoir since 1964 (see sta 07144790). Diversions above station for irrigation.

AVERAGE DISCHARGE.--60 years, 1,819 ft³/s (51.51 m³/s), 1,318,000 acre-ft/yr (1.63 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s (2,920 m³/s) June 10, 1923, gage height, 25.46 ft (7.760 m), from floodmarks, site and datum then in use, from rating curve extended above 8,000 ft³/s (226.6 m³/s) on basis of field estimate, maximum gage height, 25.55 ft (7.788 m) May 18, 1957; minimum discharge, 1.0 ft³/s (0.028 m³/s) Oct. 9, 1921, result of diversion by local power canal.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1877, 25.55 ft (7.788 m) May 18, 1957, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (283 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 24	0200	19,000	538	17.00	5.182	Aug. 19	2300	11,600	329	15.04	4.584
May 31	1700	10,300	292	14.61	4.453	Aug. 24	2200	10,400	295	14.65	4.465
June 24	0400	14,600	413	15.89	4.843	Sept. 3	1600	*30,800	872	19.57	5.965

Minimum daily discharge, 230 ft³/s (6.51 m³/s) Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	680	576	328	250	540	405	600	1660	7350	5170	694	6240
2	620	528	335	260	600	405	552	1020	5380	4090	1420	16100
3	568	504	335	270	620	412	496	724	4290	3170	1280	27500
4	528	488	335	280	584	440	488	708	4710	2940	940	15300
5	496	472	363	270	560	433	496	754	4060	5920	1090	10200
6	480	472	377	270	560	419	504	710	3630	5480	1430	9010
7	472	456	370	290	560	426	491	680	3280	3710	2510	7300
8	456	464	363	270	528	412	473	658	2990	2400	2180	5120
9	440	456	321	260	512	398	455	607	2560	2350	1490	3980
10	426	456	300	260	496	398	435	582	2010	2030	1130	3630
11	412	456	307	280	488	433	415	536	1670	1550	1330	3490
12	391	440	370	330	512	419	395	528	1490	1270	4450	3380
13	384	440	300	370	480	419	405	520	1420	1100	7390	3340
14	370	440	294	400	464	419	833	512	1340	968	4070	4000
15	356	433	363	370	440	433	989	480	1150	853	2900	5900
16	342	433	363	350	440	419	702	504	1060	784	2180	6200
17	328	440	363	370	433	405	763	680	986	724	2740	7250
18	335	448	349	370	433	405	1130	710	945	645	5420	7380
19	335	448	342	380	433	405	1130	640	896	581	7830	5000
20	342	448	335	400	426	398	1140	640	868	537	10400	3840
21	349	448	335	440	419	398	1150	2260	1060	515	8160	3380
22	349	440	282	460	419	384	1170	7000	6270	516	4700	3170
23	370	433	282	480	440	384	1330	14600	11000	512	4940	3100
24	363	433	307	460	426	377	897	18100	12200	728	9370	2890
25	363	448	307	500	419	363	801	13400	8980	1280	8250	2540
26	356	448	328	540	426	363	724	6310	10100	1130	4670	2370
27	370	440	363	560	426	363	677	3760	11300	869	3290	2280
28	405	400	377	460	405	512	643	3730	9150	825	2750	2230
29	456	350	356	400	---	880	629	6020	7680	727	3500	2300
30	496	300	300	450	---	850	1310	6540	6620	668	5090	1960
31	600	---	230	500	---	640	---	8530	---	637	6580	---
TOTAL	13238	13438	10280	11550	13489	13817	22313	104103	136445	54659	124174	180380
MEAN	427	448	332	373	482	446	744	3358	4548	1763	4006	6013
MAX	680	576	377	560	620	880	1330	18100	12200	5920	10400	27500
MIN	328	300	230	250	405	363	395	480	868	512	694	1960
AC-FT	26260	26650	20390	22910	26760	27410	44260	206500	270600	108400	246300	357800

CAL YR 1976 TOTAL 479502 MEAN 1310 MAX 20300 MIN 230 AC-FT 951100
WTR YR 1977 TOTAL 697886 MEAN 1912 MAX 27500 MIN 230 AC-FT 1384000

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1952 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1951 to current year.
WATER TEMPERATURES: October 1951 to current year.
SUSPENDED-SEDIMENT DISCHARGE: September 1961 to September 1975.

COOPERATION.--Pesticide data were furnished by Environmental Protection Agency, samples were collected and analyses reviewed by U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 6,530 micromhos June 2, 1967; minimum, 162 micromhos Nov. 17, 1964.
WATER TEMPERATURES: Maximum, 38.0°C July 25, Aug. 5, 1964; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR OF DAILY RECORD.--
SPECFIC CONDUCTANCE: Maximum daily, 3,180 micromhos Nov. 29; minimum daily, 251 micromhos Sept. 3.
WATER TEMPERATURES: Maximum daily, 33.0°C July 25; minimum daily, 0.0°C on several days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
OCT												
05...	506	1510	7.7	14.0	110	240	95	71	16	220	6.1	8.0
NOV												
04...	487	2020	7.9	7.5	8	300	130	89	20	290	7.2	6.0
DEC												
07...	380	2330	7.6	.0	8	340	140	100	22	330	7.8	6.1
JAN												
13...	314	2600	7.4	.0	4	410	150	120	27	360	7.7	7.0
FEB												
02...	601	2010	7.7	.0	25	300	100	89	19	280	7.0	5.2
MAR												
02...	375	2370	8.0	5.5	6	340	140	99	23	350	8.2	5.8
APR												
06...	528	2000	8.0	12.0	15	290	110	83	19	280	7.2	5.6
MAY												
04...	722	2250	8.7	22.5	65	290	130	86	20	340	8.7	6.7
JUN												
09...	2740	1200	8.0	28.0	65	210	57	62	14	160	4.8	7.1
JUL												
07...	4050	490	7.6	26.0	230	91	21	28	5.1	64	2.9	8.0
AUG												
03...	1240	890	7.8	30.0	420	170	50	48	13	120	4.0	6.6
SEP												
13...	3300	1020	7.6	22.5	80	210	57	62	14	130	3.9	6.9

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT												
05...	181	0	--	310	.4	8.5	848	1.15	1160	.78	2.4	1.1
NOV												
04...	219	0	150	450	.3	9.8	1150	1.56	1510	2.0	.92	.93
DEC												
07...	248	0	140	510	.5	12	1270	1.73	1300	2.1	1.5	1.0
JAN												
13...	314	0	160	580	.5	16	1440	1.96	1220	1.5	4.6	1.7
FEB												
02...	242	0	130	420	.4	13	1100	1.50	1790	3.3	1.8	1.2
MAR												
02...	248	0	160	570	.6	9.0	1340	1.82	1360	1.6	1.1	.94
APR												
06...	210	0	140	430	.5	6.8	1090	1.48	1550	1.3	1.4	.90
MAY												
04...	200	0	140	500	.6	.4	1220	1.66	2380	.02	3.4	.99
JUN												
09...	190	0	76	220	.5	7.4	647	.88	4790	.36	1.6	.50
JUL												
07...	85	0	30	96	.2	8.8	280	.38	3060	.46	2.0	.61
AUG												
03...	150	0	70	180	.4	8.5	526	.72	1760	1.5	3.5	5.2
SEP												
13...	190	0	72	200	.4	12	598	.81	5330	1.2	.23	.44

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)
OCT						
05...	10.0	2200	400	--	--	--
NOV						
04...	12.1	38	30	--	49000	--
DEC						
07...	13.4	60	380	--	13000	--
JAN						
13...	7.6	14000	--	--	9000	--
FEB						
02...	13.7	77	4500	4.6	29000	--
MAR						
02...	13.2	814	80	--	12000	--
APR						
06...	13.3	817	81	--	--	--
MAY						
04...	13.0	920	500	13	320000	24360
JUN						
09...	8.0	6800	800	--	120000	--
JUL						
07...	6.7	17000	1700	--	8000	--
AUG						
03...	6.5	--	--	24	--	--
SEP						
13...	8.0	1900	790	--	--	--

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
FEB										
02...	3	0	3	10	9	1	10	10	0	<50
MAY										
04...	7	--	4	10	7	3	10	10	0	50
AUG										
03...	19	15	4	<10	<6	4	30	30	0	<50

DATE	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)
FEB										
02...	<50	0	<10	<8	2	1200	50	<100	<97	3
MAY										
04...	50	0	10	8	2	2500	20	100	97	3
AUG										
03...	<50	0	30	26	4	17000	70	<100	<94	6

DATE	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
FEB										
02...	20	110	90	.0	2	0	2	30	20	10
MAY										
04...	10	350	340	.0	2	1	1	30	20	10
AUG										
03...	8	470	470	.1	5	4	1	90	60	30

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALDRIN (UG/L)	TOTAL ATRAZINE (UG/L)	TOTAL CHLORDANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DIAZINON (UG/L)	TOTAL DIELDRIN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL ETHION (UG/L)	TOTAL HEPTACHLOR (UG/L)	TOTAL HEPTACHLOR EPOXIDE (UG/L)
NOV												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
02...	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY												
04...	.01	ND	ND	ND	ND	ND	ND	.01	ND	ND	ND	ND
AUG												
03...	ND	.92	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	TOTAL LINDANE (UG/L)	TOTAL MALATHION (UG/L)	TOTAL METHOXYCHLOR (UG/L)	TOTAL METHYL PARATHION (UG/L)	TOTAL METHYL TRITHION (UG/L)	TOTAL PARATHION (UG/L)	TOTAL SILVEX (UG/L)	SIMAZINE TOTAL((UG/L)	TOTAL TOXAPHENE (UG/L)	TOTAL TRITHION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)
NOV												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
02...	ND	ND	ND	ND	ND	ND	--	--	ND	ND	--	--
MAY												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	.41	ND
AUG												
03...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Not detected; detection limit is 0.01 UG/L.

DATE	ALDRIN IN BOTTOM MATERIAL (UG/KG)	ATRAZINE IN BOTTOM MATERIAL (UG/KG DRY SOLIDS)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	DDD IN BOTTOM MATERIAL (UG/KG)	DDE IN BOTTOM MATERIAL (UG/KG)	DDT IN BOTTOM MATERIAL (UG/KG)	DIAZINON IN BOTTOM MATERIAL (UG/KG)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	ETHION IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)
NOV												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	LINDANE IN BOTTOM MATERIAL (UG/KG)	MALATHION IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	PARATHION IN BOTTOM MATERIAL (UG/KG)	SILVEX IN BOTTOM MATERIAL (UG/KG)	SIMAZINE IN BOTTOM MATERIAL (UG/KG DRY SOLIDS)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TRITHION IN BOTTOM MATERIAL (UG/KG)	2,4-D IN BOTTOM MATERIAL (UG/KG)	2,4,5-T IN BOTTOM MATERIAL (UG/KG)
NOV												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY												
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Not detected; detection limit is 0.10 UG/KG.

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DISSOLVED GROSS BETA AS CS-137 (PC/L)	SUSPENDED GROSS BETA AS CS-137 (PC/L)	DISSOLVED RA-226 (RADON METHOD) (PC/L)	DISSOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUSPENDED GROSS ALPHA AS U-NAT. (UG/L)	DISSOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L)
NOV							
04...	<7.0	2.3	.10	<12	1.9	<5.6	2.0
JUN							
09...	11	10	.09	12	16	9.0	8.2

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

PHYTOPLANKTON ANALYSES (OCT.1976 - JUL.1977)

DATE	OCT 5.76		NOV 4.76		DEC 7.76		JAN 13.77		FEB 2.77	
TIME	1000		1020		1000		1240		1110	
TOTAL CELLS/ML	190000		49000		13000		9000		29000	
DIVERSITY: DIVISION	0.6		0.4		1.1		1.2		1.2	
.CLASS	0.6		0.4		1.1		1.2		1.2	
..ORDER	1.5		1.1		1.9		1.6		2.0	
...FAMILY	1.7		1.3		2.4		2.1		2.3	
....GENUS	2.1		1.9		2.6		2.1		2.8	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	*	0	110	1	--	-	--	-
...COELASTRACEAE										
....COELASTRUM	--	-	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	--	-	630	2
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	1700	1	*	0	--	-	*	0	--	-
....CHODATELLA	*	0	*	0	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
....FRANCEIA	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	*	0	--	-	110	1	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	*	0	--	-	--	-	--	-
....WESTELLA	2300	1	880	2	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	18000	10	1300	3	460	4	81	1	1300	4
....TETRASTRUM	2300	1	--	-	--	-	--	-	--	-
..TETRASPORALES										
...PALMELLACEAE										
....SPHAEROCYSTIS	--	-	--	-	210	2	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	1100	1	--	-	--	-	2500#	28	630	2
...VOLVOCACEAE										
....GONIUM	--	-	--	-	--	-	--	-	--	-
....PANDORINA	--	-	--	-	--	-	--	-	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....CLOSTERIUM	--	-	--	-	--	-	--	-	240	1
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..PENNALES										
...NAVICULACEAE										
....ENTOMONEIS	--	-	*	0	--	-	*	0	--	-
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	12000	6	7100	14	2200#	16	450	5	--	-
....MELOSIRA	76000#	41	27000#	56	540	4	--	-	1500	5
....STEPHANODISCUS	--	-	--	-	*	0	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....COCCONEIS	--	-	--	-	160	1	--	-	--	-
...FRAGILARIACEAE										
....FRAGILARIA	67000#	36	--	-	--	-	4100#	45	--	-
....SYNEDRA	--	-	--	-	160	1	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	--	-	370	3	81	1	--	-
...NAVICULACEAE										
....CALONEIS	--	-	--	-	--	-	--	-	--	-
....NAVICULA	*	0	640	1	6300#	47	81	1	1200	4
...NITZSCHIACEAE										
....HANTZSCHIA	--	-	--	-	--	-	--	-	*	0
....NITZSCHIA	4000	2	10000#	21	--	-	940	10	3200	11
...SURIRELLACEAE										
....SURIRELLA	--	-	--	-	160	1	*	0	400	1
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...MALLOMONADACEAE										
....MALLOMONAS	--	-	--	-	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

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07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

PHYTOPLANKTON ANALYSES (OCT.1976 - JUL.1977)

DATE TIME	OCT 5.76 1000		NOV 4.76 1020		DEC 7.76 1000		JAN 13.77 1240		FEB 2.77 1110	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.MYXOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	1700	13	--	-	5100#	18
....ANACYSTIS	--	-	--	-	--	-	--	-	--	-
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	270	2	--	-	8700#	30
....OSCILLATORIA	--	-	--	-	--	-	730	8	5900#	21
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	--	-	--	-	--	-	--	-
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	430	1	--	-	*	0	--	-
....TRACHELOMONAS	--	-	--	-	110	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

PHYTOPLANKTON ANALYSES (OCT.1976 - JUL.1977)

DATE	MAR 2.77	MAY 4.77	JUN 9.77	JUL 7.77
TIME	0920	1300	0930	0830
TOTAL CELLS/ML	12000	320000	120000	8000
DIVERSITY: DIVISION	1.4	1.3	1.4	1.4
.CLASS	1.4	1.3	1.4	1.4
..ORDER	2.0	1.3	2.3	1.7
...FAMILY	2.2	1.9	2.7	1.9
....GENUS	2.2	2.3	3.2	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	*	0	140	2
...COELASTRACEAE								
....COELASTRUM	--	-	16000	5	2900	2	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	*	0	--	-
...MICRACTINIACEAE								
....MICRACTINIUM	--	-	20000	6	6100	5	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	69	1	9700	3	*	0	--	-
....CHODATELLA	--	-	--	-	*	0	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	410	5
....FRANCEIA	--	-	--	-	*	0	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	1100	1	--	-
....SELENASTRUM	--	-	--	-	*	0	--	-
....TETRAEDRON	--	-	--	-	*	0	--	-
....WESTELLA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	1400	1	--	-
....CRUCIGENIA	--	-	--	-	1400	1	--	-
....SCENEDESMUS	550	5	35000	11	6500	5	540	7
....TETRASTRUM	--	-	24000	8	4000	3	--	-
..TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	1500	13	--	-	1100	1	--	-
...VOLVOCACEAE								
....GONIUM	--	-	--	-	--	-	950	12
....PANDORINA	--	-	--	-	*	0	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....CLOSTERIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..PENNALES								
...NAVICULACEAE								
....ENTOMONEIS	--	-	--	-	--	-	--	-
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	5300#	44	170000#	53	11000	9	*	0
....MELOSIRA	69	1	18000	6	30000#	25	270	3
....STEPHANODISCUS	--	-	--	-	--	-	140	2
..PENNALES								
...ACHNANTHACEAE								
....COCCONEIS	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....FRAGILARIA	--	-	1600	1	27000#	22	--	-
....SYNEDRA	--	-	--	-	--	-	270	3
...GOMPHONEMATACEAE								
....GOMPHONEMA	140	1	--	-	--	-	--	-
...NAVICULACEAE								
....CALONEIS	--	-	*	0	*	0	--	-
....NAVICULA	350	3	--	-	720	1	*	0
...NITZSCHIACEAE								
....HANTZSCHIA	--	-	--	-	--	-	--	-
....NITZSCHIA	1300	11	*	0	1400	1	--	-
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...MALLOMONADACEAE								
....MALLOMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

PHYTOPLANKTON ANALYSES (OCT.1976 - JUL.1977)

DATE	MAR 2,77		MAY 4,77		JUN 9,77		JUL 7,77	
TIME	0920		1300		0930		0830	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.MYXOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	16000	13	--	-
....ANACYSTIS	--	-	23000	7	--	-	--	-
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	5000#	63
....OSCILLATORIA	--	-	--	-	9700	8	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	*	0	--	-
...CRYPTOMONODACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	*	0
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	2700#	22	--	-	*	0	--	-
....TRACHELOMONAS	--	-	--	-	--	-	270	3

NOTE: # - DOMINANT ORGANISM, EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT			
18...	0855	8.0	390
31...	0930	7.0	400
NOV			
16...	1055	4.0	520
DEC			
02...	0850	1.0	430
07...	1000	.0	510
13...	0845	1.5	530
31...	0915	.0	400
JAN			
13...	1240	.0	580
FEB			
02...	0810	1.5	460
02...	1110	.0	420
22...	0905	10.0	540
MAR			
02...	0920	5.5	570
APR			
05...	0955	12.0	430
12...	0810	15.0	580
14...	0800	15.5	230
17...	0915	18.5	400
23...	0805	14.5	300
MAY			
01...	1000	20.5	290
04...	1300	22.5	500

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
MAY			
06...	0800	19.5	420
11...	0910	18.5	580
17...	0920	19.5	550
21...	0955	18.0	400
22...	0855	19.5	86
25...	0825	21.5	90
28...	1005	22.5	150
31...	0940	22.0	130
JUN			
01...	0820	22.5	96
09...	0930	28.0	220
10...	0910	24.0	260
15...	1015	27.5	360
17...	0700	24.5	460
24...	0900	23.5	36
27...	0935	25.0	48
JUL			
06...	0910	25.5	200
07...	0830	26.0	96
08...	1445	29.5	170
12...	1045	28.0	320
18...	1100	27.5	400

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
JUL			
21...	1905	29.5	490
AUG			
01...	0830	23.0	420
03...	0900	30.0	180
04...	0910	25.0	100
14...	0940	24.5	42
18...	0915	24.0	120
19...	1025	21.5	58
28...	1005	24.0	170

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
SEP			
03...	1050	24.0	26
08...	0845	25.5	86
13...	0905	22.5	200
18...	1715	23.0	92
24...	1700	28.5	240
29...	0855	22.5	320

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	1620	2280	2890	2060	2360	1780	1400	601	652	1850	506
2	1170	1870	1990	2930	1990	2380	1770	1710	716	815	1660	379
3	1300	1880	2030	2530	2000	2300	1930	2020	708	856	970	251
4	1450	1980	2100	2440	2140	2180	1980	2250	864	1040	1140	284
5	1510	2080	2100	2420	2170	2160	2080	2210	864	462	1410	322
6	1690	2160	2130	2390	2090	2280	1910	1880	879	401	1070	377
7	1680	2110	2210	2370	2110	2330	2070	2300	918	591	709	412
8	1810	2100	2160	2350	2150	2370	2140	2160	1020	864	608	537
9	1890	2170	2500	2320	2100	2310	2160	2350	1120	1080	817	778
10	1960	2150	2180	2300	2150	2270	2220	2380	1300	1140	958	895
11	1970	2180	2060	2270	2180	2110	2300	2430	1460	1360	1020	994
12	2030	2170	2190	2250	2140	2360	2390	2450	1530	1510	834	1040
13	2050	2180	2340	2230	2240	2250	2340	2320	1590	1630	316	1120
14	2030	2280	2220	2200	2270	2280	1020	2540	1530	1730	313	950
15	2090	2210	2010	2180	2270	2200	1250	2530	1670	1810	467	562
16	2120	2160	2180	2180	2270	2180	1650	2510	1870	1800	634	598
17	2120	2140	2170	2170	2270	2200	1810	2300	2000	1920	810	649
18	2230	2130	2200	2170	2250	2180	1380	2080	1970	2010	685	557
19	2080	2120	2210	2170	2310	2240	1290	1590	1910	2100	386	537
20	2170	2080	2210	2160	2340	2340	1540	1960	2010	2100	388	508
21	2160	2110	2380	2160	2350	2250	1460	1800	1840	2120	506	968
22	2180	2210	2620	2150	2380	2320	1320	618	818	2080	499	1080
23	2120	2240	2620	2050	2240	2320	1420	671	378	2010	663	1140
24	2110	2200	2210	2040	2320	2320	1720	380	320	1790	424	1250
25	2040	2240	2150	1950	2310	2280	1880	310	333	1010	458	1250
26	2120	2120	2150	1950	2240	2310	2020	431	359	1080	573	1340
27	2150	2090	2100	1900	2280	2220	2160	672	342	1470	777	1370
28	1930	2280	2180	1920	2310	1920	2240	845	364	1310	895	1320
29	1850	3180	2190	2010	---	1700	2300	957	402	1540	878	1510
30	1820	2760	2210	2150	---	1150	2160	760	498	1700	709	1360
31	1800	---	2580	2140	---	1580	---	1010	---	1720	573	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.5	9.5	2.5	0.0	1.0	5.0	11.5	20.5	22.5	25.0	23.0	24.0
2	19.5	11.5	1.0	0.0	1.5	6.0	11.5	19.5	24.5	25.0	25.5	24.0
3	20.5	10.0	1.0	0.0	1.5	4.5	10.0	19.0	24.5	26.5	26.0	24.0
4	21.0	8.5	4.0	1.5	2.5	4.0	9.0	21.5	26.5	25.5	24.5	24.0
5	15.5	6.5	4.5	0.0	2.5	7.5	6.5	21.5	26.5	25.5	25.5	25.5
6	12.0	8.5	4.5	0.0	2.0	5.0	9.0	19.5	25.0	25.5	26.5	24.5
7	12.5	8.5	1.5	0.0	0.0	7.0	13.0	29.0	23.5	28.0	27.5	25.5
8	9.0	6.0	1.0	0.0	3.5	8.0	15.0	23.0	23.5	29.5	25.0	25.5
9	12.0	7.0	1.5	0.0	5.5	9.0	15.0	22.0	23.0	25.5	25.0	25.5
10	13.0	8.0	5.0	0.0	6.0	11.0	19.0	19.5	24.0	31.5	26.0	22.5
11	15.0	7.5	1.0	0.0	8.5	12.5	15.0	18.5	24.0	30.0	24.5	25.0
12	15.5	2.5	1.0	0.0	8.5	8.0	15.0	18.0	25.0	28.0	22.5	27.0
13	16.5	6.0	1.5	0.0	7.5	11.5	17.5	19.0	25.5	31.0	22.0	24.0
14	16.5	4.0	1.0	1.0	8.5	7.5	15.5	19.0	25.5	30.0	24.5	21.0
15	15.5	3.5	2.0	0.0	9.0	11.0	17.0	20.0	27.5	32.0	25.5	21.0
16	10.5	2.0	3.5	0.0	1.0	10.0	18.5	21.0	24.0	27.5	26.0	22.0
17	8.0	2.0	3.0	0.0	3.0	11.5	18.5	19.0	24.5	31.0	25.0	23.0
18	8.0	5.0	4.0	0.0	6.0	10.5	18.5	21.0	25.5	31.0	24.0	23.0
19	7.5	7.0	9.0	0.0	6.5	10.0	18.5	21.5	25.0	32.0	21.5	22.0
20	4.0	7.5	1.5	0.0	6.0	7.0	19.5	19.5	26.5	31.5	21.0	22.0
21	7.5	5.5	1.5	1.5	9.0	7.5	17.0	18.0	25.0	29.5	26.0	21.0
22	9.0	2.0	1.5	1.0	10.0	5.0	16.5	19.5	24.0	31.5	25.0	23.5
23	14.0	5.5	1.5	1.5	9.0	9.5	14.5	20.5	22.0	27.0	24.5	23.0
24	13.0	5.5	1.0	1.5	4.5	11.0	16.5	20.5	23.5	32.5	24.0	28.5
25	9.0	14.5	3.5	2.5	8.0	11.5	14.0	21.5	24.5	33.0	25.0	27.0
26	7.0	12.5	2.0	2.0	4.5	14.0	14.0	23.5	25.5	26.5	26.5	22.0
27	8.0	0.0	3.0	1.0	4.0	15.0	16.5	22.5	25.0	27.5	25.0	24.0
28	6.5	0.0	2.0	0.0	4.0	14.5	18.5	22.5	26.5	26.5	24.0	22.0
29	9.5	1.5	1.5	0.0	---	11.5	20.5	23.0	25.0	26.0	22.5	22.5
30	8.5	1.0	0.0	1.5	---	11.0	19.0	26.0	25.0	32.0	23.0	22.5
31	7.0	---	0.0	1.5	---	9.0	---	22.0	---	27.5	25.5	---

07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS--Continued
(National stream-quality accounting network, pesticide and radiochemical station)

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT					
05...	1400	506	--	234	320
NOV					
04...	1025	487	--	61	80
MAR					
02...	0925	375	--	13	13
APR					
06...	1000	528	--	86	123
MAY					
04...	1010	722	--	199	388
26...	1440	5560	--	606	9100
JUN					
09...	0930	2740	1200	243	1800
23...	1020	10200	--	1440	39700
AUG					
03...	0900	1240	890	616	2060
SEP					
13...	1000	3270	--	198	1750

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
OCT										
05...	1400	506	234	--	--	--	99	100	--	--
MAY										
04...	1010	722	199	58	65	85	95	100	--	--
JUN										
23...	1020	10200	1440	68	69	77	92	95	97	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
NOV												
04...	1025	17	61	0	10	40	66	90	96	100	--	--
APR												
06...	1000	17	86	--	0	5	46	84	92	98	98	100

07146570 COLE CREEK NEAR DEGRAFF, KS

LOCATION.--Lat 37°56'50", long 96°46'50", in NE¼NW¼SW¼ sec.21, T.24 S., R.6 E., Butler County, Hydrologic Unit 11030017, at downstream side of highway bridge, 5.0 mi (8.0 km) southeast of DeGraff, and 6.0 mi (9.7 km) upstream from mouth.

DRAINAGE AREA.--30 mi² (80 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,332.83 ft (406.247 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records poor.

AVERAGE DISCHARGE.--16 years, 15.8 ft³/s (0.447 m³/s), 11,450 acre-ft/yr (14.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/s (314 m³/s) June 5, 1965, gage height, 14.12 ft (4.304 m); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1947, 17.0 ft (5.18 m) May 1955, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 914 ft³/s (25.9 m³/s) June 19, gage height, 7.75 ft (2.362 m), no peak above base of 1,000 ft³/s (28.3 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.12	.16	1.6	8.5	27	12	.10	35
2	.00	.00	.00	.00	.15	.11	1.4	4.1	12	11	.19	34
3	.00	.00	.00	.00	.20	.09	.84	2.2	6.1	9.9	.15	20
4	.00	.00	.00	.00	.25	.05	.62	1.6	3.7	9.0	2.9	12
5	.00	.00	.00	.00	.30	.03	.60	1.2	2.4	7.8	3.2	8.8
6	.00	.00	.00	.00	.32	.02	.53	1.3	1.6	6.7	2.7	14
7	.00	.00	.00	.00	.34	.01	.42	1.0	1.1	5.7	2.0	9.1
8	.00	.00	.00	.00	.36	.01	.28	.97	.71	4.7	1.5	5.7
9	.00	.00	.00	.00	.36	.01	.19	.82	.77	4.7	.85	3.5
10	.00	.00	.00	.00	.36	.00	.07	.59	.53	4.1	.39	2.6
11	.00	.00	.00	.00	.35	.00	.36	.40	.26	3.2	14	1.4
12	.00	.00	.00	.00	.34	.00	.25	.26	2.3	2.5	21	1.3
13	.00	.00	.00	.00	.34	.01	.48	.19	13	2.6	13	2.0
14	.00	.00	.00	.00	.34	.01	1.2	.09	8.2	2.2	6.4	2.3
15	.00	.00	.00	.00	.33	.02	2.0	.01	6.3	1.6	3.4	2.3
16	.00	.00	.00	.00	.33	.02	1.5	.02	4.7	1.0	2.0	2.1
17	.00	.00	.00	.00	.33	.02	1.4	.92	4.2	.49	2.0	1.4
18	.00	.00	.00	.00	.32	.01	1.9	1.7	4.1	.13	2.0	.96
19	.00	.00	.00	.00	.32	.01	1.6	1.5	268	.02	2.8	.33
20	.00	.00	.00	.00	.31	.01	1.3	1.4	314	.01	2.0	.19
21	.00	.00	.00	.00	.30	.01	1.3	249	81	.12	1.4	.56
22	.00	.00	.00	.00	.30	.00	1.1	25	381	7.3	.95	.77
23	.00	.00	.00	.01	.30	.00	.90	186	114	3.3	6.2	.76
24	.00	.00	.00	.02	.95	.00	.72	32	42	2.1	1.1	.43
25	.00	.00	.00	.03	.74	.00	.56	10	26	.59	.95	.21
26	.00	.00	.00	.04	.55	.00	.46	5.4	21	.48	.32	.10
27	.00	.00	.00	.05	.43	.00	.41	4.7	18	.42	.20	.00
28	.00	.00	.00	.06	.27	7.2	.33	30	16	.26	5.0	.00
29	.00	.00	.00	.07	---	7.2	.70	129	14	.22	1.6	.00
30	.00	.00	.00	.08	---	4.1	15	114	13	.04	.32	.00
31	.00	---	.00	.10	---	2.6	---	168	---	.08	.32	---
TOTAL	.00	.00	.00	.46	9.96	21.71	40.02	961.46	1386.97	104.26	100.94	161.81
MEAN	.000	.000	.000	.015	.36	.70	1.33	31.0	46.2	3.36	3.26	5.39
MAX	.00	.00	.00	.10	.95	7.2	15	249	381	12	21	35
MIN	.00	.00	.00	.00	.12	.00	.05	.01	.26	.01	.10	.00
AC-FT	.00	.00	.00	.9	20	43	79	1910	2750	207	200	321

CAL YR 1976 TOTAL 4874.80 MEAN 13.3 MAX 2310 MIN .00 AC-FT 9680
WTR YR 1977 TOTAL 2784.01 MEAN 7.64 MAX 381 MIN .00 AC-FT 5530

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
MAY					
21...	1735	157	174	500	212

07147070 WHITEWATER RIVER AT TOWANDA, KS

LOCATION.--Lat 37°47'45", long 97°00'45", in SE¼SW¼SE¼ sec.8, T.26 S., R.4 E., Butler County, Hydrologic Unit 11030017, at downstream side of bridge on State Highway 254, 0.5 mi (0.8 km) west of Towanda, 2.4 mi (3.9 km) downstream from West Branch, and at mile 17.5 (28.2 km).

DRAINAGE AREA.--426 mi² (1,100 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1960-61. October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,231.47 ft (375.352 m) above mean sea level (levels by State Highway Commission). Prior to Oct. 1, 1961, crest-stage gage at same site at datum 5.22 ft (1.591 m) higher.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--16 years, 202 ft³/s (5.721 m³/s), 146,300 acre-ft/yr (180 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft³/s (1,140 m³/s) June 5, 1965, gage height, 28.02 ft (8.540 m); minimum, 0.20 ft³/s (0.006 m³/s) July 14, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1923, 28.6 ft (8.72 m) April 1944, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	2200	2,350	66.6	11.96	3.645	June 23	0500	* 8,800	249	22.90	6.980
May 23	2000	2,290	64.9	11.79	3.594	Aug. 11	2000	3,290	93.2	14.99	4.569
May 31	1300	2,280	64.6	11.74	3.578	Sept. 1	2300	2,990	84.7	14.14	4.310

Minimum discharge, 3.1 ft³/s (0.088 m³/s) Oct. 4, 6, 7, 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	10	6.6	7.9	8.7	7.5	17	21	485	89	20	2080
2	5.9	8.8	6.9	7.6	8.7	7.1	15	29	169	80	19	1550
3	5.1	6.6	7.3	7.6	9.3	10	11	40	98	73	20	281
4	3.7	9.0	7.9	7.4	10	11	11	22	68	79	62	181
5	3.5	9.6	8.9	7.3	11	11	12	16	51	82	192	175
6	3.1	7.6	9.0	7.0	11	9.9	11	19	40	62	94	131
7	3.4	6.7	8.1	7.0	11	9.8	10	35	31	50	42	91
8	3.1	7.6	7.7	7.0	10	8.8	9.6	50	23	192	44	71
9	4.0	7.4	7.9	6.8	11	8.7	9.2	44	19	163	29	61
10	4.6	8.0	8.2	6.8	12	8.3	8.0	33	15	76	21	53
11	3.8	13	8.0	6.8	13	9.5	7.6	24	13	54	1920	49
12	4.9	6.0	8.1	6.8	14	8.8	7.6	18	11	41	1200	47
13	5.2	4.7	8.1	6.8	14	12	15	14	30	35	588	48
14	6.6	5.4	8.1	6.8	15	9.1	38	12	33	30	418	140
15	6.3	6.2	8.2	6.8	14	7.4	38	10	17	26	118	82
16	4.6	6.9	8.9	6.8	12	7.1	33	10	13	26	74	63
17	5.4	7.4	9.2	7.0	11	7.0	28	12	22	23	68	62
18	6.0	8.4	9.8	7.0	11	7.6	28	14	633	22	67	66
19	5.9	8.2	10	7.2	11	7.2	29	13	491	21	49	51
20	5.5	8.1	9.3	7.3	11	6.3	24	15	3030	20	45	45
21	7.0	8.1	8.4	7.4	11	6.0	20	1400	4980	19	61	38
22	6.0	8.4	8.1	8.1	11	5.6	16	1070	6420	27	49	34
23	9.6	7.5	8.1	8.7	13	5.6	16	1440	7110	26	665	34
24	8.4	8.6	8.3	9.4	12	5.6	15	908	1940	26	159	30
25	8.4	7.8	8.9	11	12	5.9	13	187	496	25	85	28
26	8.7	8.1	9.2	11	10	7.4	12	98	270	24	59	26
27	12	7.4	9.2	11	8.8	10	12	73	189	19	54	28
28	7.6	8.7	9.7	11	8.2	41	12	61	144	20	270	43
29	6.7	6.8	9.8	11	---	61	12	129	116	23	156	32
30	12	7.1	9.6	11	---	45	32	776	100	20	94	34
31	14	---	9.5	9.6	---	26	---	1970	---	20	66	---
TOTAL	197.2	234.1	265.0	250.9	314.7	393.2	522.0	8563	27057	1488	6808	5654
MEAN	6.36	7.80	8.55	8.09	11.2	12.7	17.4	276	902	48.0	220	188
MAX	14	13	10	11	15	61	38	1970	7110	192	1920	2080
MIN	3.1	4.7	6.6	6.8	8.2	5.6	7.6	10	11	19	19	26
AC-FT	391	464	526	498	624	780	1040	16980	53670	2950	13500	11210

CAL YR 1976 TOTAL 39986.6 MEAN 109 MAX 11200 MIN 3.1 AC-FT 79310
WTR YR 1977 TOTAL 51747.1 MEAN 142 MAX 7110 MIN 3.1 AC-FT 102600

07147070 WHITEWATER RIVER AT TOWANDA, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1962 to current year.

REMARKS.--Sediment samples are collected only at selected flow conditions.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)
APR												
21...	15	16.0	20	830	560	240	55	120	1.8	6.6	270	0
MAY												
21...	1880	18.0	600	160	89	46	11	22	.8	6.6	86	0
21...	2260	17.5	700	150	78	45	10	16	.6	7.5	88	0
22...	1360	17.0	480	100	36	30	6.8	12	.5	6.4	78	0
22...	760	18.0	700	110	43	33	6.9	13	.5	6.3	82	0
22...	503	18.0	460	120	58	35	7.6	14	.6	6.3	76	0
JUN												
27...	215	23.0	65	350	170	100	24	39	.9	6.7	220	0
JUL												
21...	19	28.0	30	560	380	150	44	120	2.2	5.6	220	0
AUG												
04...	88	24.0	80	540	350	150	41	110	2.1	4.7	230	0
11...	2790	21.0	1200	110	44	32	7.1	20	.8	5.1	80	0
11...	3150	21.0	800	82	34	24	5.4	13	.6	4.6	58	0
11...	3310	20.0	620	88	39	25	6.2	9.0	.4	5.6	60	0
12...	1330	20.0	440	100	44	29	7.3	12	.5	8.6	68	0
12...	1020	20.0	420	110	51	32	8.1	14	.6	5.7	72	0
12...	769	21.0	410	140	76	41	9.7	18	.7	8.6	78	0
12...	662	21.5	380	150	84	43	11	23	.8	9.7	80	0

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL RESIDUE (MG/L)	LOSS ON IGNITION (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
APR												
21...	480	230	.5	13	1410	57.1	1550	241	.38	1.2	1.6	.13
MAY												
21...	71	39	.4	9.6	273	1390	1420	217	1.8	5.2	7.0	1.0
21...	76	25	.3	9.4	249	1520	2350	264	1.7	--	--	.31
22...	42	16	.4	9.2	181	665	1490	209	1.9	6.0	7.9	.99
22...	46	15	.4	11	204	419	1270	195	2.1	4.1	6.2	.87
22...	49	18	.4	11	222	302	1120	167	2.3	3.7	6.0	.79
JUN												
27...	150	72	.3	15	559	325	726	171	1.1	1.2	2.3	.28
JUL												
21...	270	250	.3	9.9	1010	51.8	1250	346	.01	1.3	1.3	.15
AUG												
04...	290	230	.3	7.8	1010	240	1300	274	.25	1.6	1.9	.19
11...	40	34	.4	7.7	198	1490	3540	373	1.1	4.3	5.4	1.4
11...	31	21	.3	8.4	152	1240	2410	268	1.4	3.7	5.1	.75
11...	40	12	.4	9.3	160	1430	1820	210	1.4	3.4	4.8	.76
12...	38	18	.4	11	193	693	1170	182	2.2	15	17	.82
12...	44	27	.3	11	215	592	1140	178	2.3	4.6	6.9	.89
12...	67	29	.3	11	255	529	1110	172	2.4	3.7	6.1	.89
12...	71	40	.4	12	290	518	1130	191	2.3	4.1	6.4	.87

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	PHENOLS (UG/L)
APR												
21...	2120	7.7	7.2	39	.9	11000	64	300	260	8.6	7.3	2
MAY												
19...	1820	7.9	9.2	--	3.5	750	860	220	230	5.6	--	--
21...	445	7.2	4.6	210	3.4	140000	100000	170000	71	8.7	42	14
21...	419	7.4	4.1	140	5.2	110000	88000	290000	72	5.6	43	2
22...	285	7.4	6.3	130	--	--	--	--	64	5.0	39	8
22...	293	7.4	6.4	160	--	150000	110000	B370000	67	5.2	34	2
22...	320	7.3	8.0	150	--	--	--	--	62	6.1	31	2
JUN												
22...	180	--	--	--	--	--	--	--	--	--	--	--
27...	815	7.9	7.0	45	--	4100	1900	2000	180	4.4	8.8	7
JUL												
21...	1570	8.3	14.4	46	6.4	13000	18000	440	180	1.8	10	3
AUG												
04...	1530	7.8	8.6	36	5.5	14000	82300	12000	189	5.8	9.7	1
11...	310	7.5	4.4	200	5.0	--	--	--	66	4.0	63	4
11...	210	7.4	4.6	0	4.4	B460000	76000	160000	48	3.7	42	2
11...	210	7.6	5.8	130	4.7	300000	40000	150000	49	2.4	32	3
12...	258	7.6	6.0	1	7.2	--	--	--	56	2.7	34	2
12...	305	7.6	6.1	85	8.4	320000	93000	220000	59	2.9	29	2
12...	380	7.7	6.2	95	8.4	--	--	--	64	2.5	29	2
12...	408	7.7	6.3	78	7.9	--	--	--	66	2.6	26	4

B Results based on colony count outside the acceptable range (non-ideal colony count).

07147070 WHITEWATER RIVER AT TOWANDA, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)
APR											
21...	6	--	5	10	--	2	<10	--	0	<50	--
MAY											
21...	9	7	2	<10	0	13	20	--	0	<50	--
21...	6	4	2	<10	<1	9	40	40	0	<50	<50
22...	13	10	3	<10	0	13	20	--	0	<50	--
22...	22	20	2	<10	--	5	30	--	0	<50	--
22...	3	1	2	<10	--	2	0	--	0	<50	--
JUN											
27...	4	--	4	10	--	3	10	--	0	<50	--
JUL											
21...	2	--	2	<10	<8	2	10	--	0	<50	<50
AUG											
04...	6	4	2	<10	<8	2	10	10	0	<50	<49
11...	34	32	2	<10	<2	8	36	32	4	50	49
11...	30	27	3	<10	5	5	20	16	4	<50	50
11...	10	9	1	<10	1	9	20	20	0	<50	49
12...	15	11	4	<10	<6	4	16	12	4	<50	<50
12...	18	15	--	<10	7	3	8	4	4	<50	49
12...	0	0	2	<10	<3	7	16	16	0	<50	<50
12...	18	16	2	<10	<5	5	16	16	0	<50	<50

DATE	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
APR											
21...	0	20	--	5	1300	140	100	--	630	160	470
MAY											
21...	0	30	25	5	23000	280	<100	<91	790	670	120
21...	0	40	29	11	36000	110	100	96	1400	1400	40
22...	0	30	15	15	29000	160	<100	<94	850	840	8
22...	0	30	--	5	25000	130	100	--	690	690	0
22...	0	20	--	5	21000	160	100	--	610	600	8
JUN											
27...	0	<10	<7	3	3200	30	100	--	[illegible]	--	50
JUL											
21...	0	10	8	2	1300	20	<100	<91	220	210	10
AUG											
04...	1	1	0	2	4600	30	<100	<95	300	200	100
11...	1	40	28	12	24000	150	<100	<89	1500	1500	20
11...	0	30	8	22	14000	160	<100	91	1100	1100	20
11...	1	20	5	15	14000	180	<100	96	790	770	20
12...	0	20	9	11	9200	160	<100	<98	530	510	20
12...	1	10	0	10	7700	110	<100	95	510	510	0
12...	0	10	0	19	7200	120	<100	<89	530	530	0
12...	0	20	8	12	9200	140	<100	<78	540	540	0

DATE	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELF-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
APR											
21...	.0	--	.0	<50	2	1	--	1	30	20	10
MAY											
21...	.1	.0	.2	<50	6	1	1	0	90	70	20
21...	.2	.0	.3	<50	6	1	1	0	160	140	20
22...	.6	.2	.4	<50	7	1	1	0	100	80	20
22...	.0	.0	.2	50	4	0	0	0	110	80	30
22...	.0	.0	.6	50	2	0	0	0	70	20	50
JUN											
27...	.0	--	.0	<50	3	2	0	2	70	--	10
JUL											
21...	--	--	.4	<50	2	1	--	1	50	50	4
AUG											
04...	.1	.0	.2	50	3	2	1	1	30	20	8
11...	.4	.3	.1	50	5	0	0	0	130	110	20
11...	.3	.3	.0	50	5	1	1	0	80	40	40
11...	.2	.1	.1	50	6	0	0	0	70	50	20
12...	.2	.2	.0	<50	4	4	4	0	50	30	20
12...	.2	.0	.2	50	4	1	0	1	50	40	10
12...	.2	.2	.0	<50	4	1	1	0	50	20	30
12...	.2	.0	.2	50	4	0	0	0	60	40	20

07147070 WHITEWATER RIVER AT TOWANDA, KS--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	OIL AND GREASE (MG/L)	TOTAL PCB (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLORDANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DIAZINON (UG/L)	TOTAL DIELDRIN (UG/L)	TOTAL ENDOSULFAN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL ETHION (UG/L)
APR												
21...	0	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
MAY												
21...	0	.0	.00	.0	.00	.00	.00	.12	.00	.00	.00	.00
21...	0	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
22...	--	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
AUG												
11...	0	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
11...	0	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
12...	0	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00

DATE	TOTAL HEPTACHLOR (UG/L)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL MALATHION (UG/L)	TOTAL METHYL PARATHION (UG/L)	TOTAL METHYL TRITHION (UG/L)	TOTAL PARATHION (UG/L)	TOTAL TOXAPHENE (UG/L)	TOTAL TRITHION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)
APR												
21...	.00	.00	.00	.00	.00	.00	.00	0	.00	.08	.03	.00
MAY												
21...	.00	.00	.00	.00	.00	.00	.00	0	.00	.30	.11	.00
21...	.00	.00	.00	.00	.00	.00	.00	0	.00	.22	.05	.00
22...	.00	.00	.00	.00	.00	.00	.00	0	.00	.32	.11	.00
AUG												
11...	.00	.00	.00	.00	.00	.01	.01	0	.00	.45	.49	.00
11...	.00	.00	.00	.00	.00	.00	.00	0	.00	.27	.24	.00
12...	.00	.00	.00	.00	.00	.00	.00	0	.00	--	--	--

DATE	PCB IN BOTTOM MATERIAL (UG/KG)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	DDD IN BOTTOM MATERIAL (UG/KG)	DDE IN BOTTOM MATERIAL (UG/KG)	DDT IN BOTTOM MATERIAL (UG/KG)	DIAZINON IN BOTTOM MATERIAL (UG/KG)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	ETHION IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)
MAY											
19...	0	.0	0	.0	.0	.0	.0	.0	.0	.0	.0

DATE	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	LINDANE IN BOTTOM MATERIAL (UG/KG)	MALATHION IN BOTTOM MATERIAL (UG/KG)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TRITHION IN BOTTOM MATERIAL (UG/KG)	2,4-D IN BOTTOM MATERIAL (UG/KG)	2,4,5-T IN BOTTOM MATERIAL (UG/KG)	SILVEX IN BOTTOM MATERIAL (UG/KG)
MAY											
19...	.0	.0	.0	.0	.0	.0	0	.0	0	0	0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR					
21...	1115	7.8	--	115	2.4
MAY					
19...	1300	10	1820	154	4.3
21...	1500	1880	445	1690	8580
21...	1900	2260	419	1950	11900
22...	0855	1360	285	1390	5100
22...	1325	760	293	1810	3710
22...	1700	503	320	878	1190
JUN					
06...	1210	40	--	136	15
22...	1310	2040	180	1940	10700
27...	1115	215	815	160	93
JUL					
21...	1330	19	1570	95	4.9
AUG					
04...	1340	88	1530	212	50
11...	1325	2790	310	3100	23400
11...	1610	3150	210	2170	18500
11...	2015	3310	210	1530	13700
12...	0820	1330	258	946	3400
12...	1010	1020	305	875	2410
12...	1230	769	390	853	1770
12...	1410	662	408	808	1440

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SUS- PENDED SEDI- MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM
MAY							
21...	1500	1880	1690	52	63	70	78
21...	1900	2760	1950	57	64	72	82
22...	0855	1360	1390	79	85	80	94
22...	1325	760	1810	51	--	53	58
22...	1700	503	878	79	79	80	88
JUN							
22...	1310	2040	1940	54	72	83	92
AUG							
11...	1325	2790	3100	45	--	--	81
11...	1610	3150	2170	55	70	77	--
11...	2015	3310	1530	66	74	81	89
12...	0820	1330	946	65	76	78	88
12...	1010	1020	875	57	74	80	89
12...	1230	769	853	60	70	78	86
12...	1410	662	808	71	72	77	87

DATE	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM
MAY						
21...	90	98	100	--	--	--
21...	93	97	100	--	--	--
22...	95	99	100	--	--	--
22...	59	63	63	63	78	100
22...	98	99	100	--	--	--
JUN						
22...	--	100	--	--	--	--
AUG						
11...	94	99	100	--	--	--
11...	--	99	100	--	--	--
11...	96	99	100	--	--	--
12...	98	100	--	--	--	--
12...	98	99	100	--	--	--
12...	94	99	100	--	--	--
12...	99	100	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAM- PLING POINTS	SUS- PENDED SEDI- MENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM
MAY							
19...	1300	3	154	6	17	18	28

DATE	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
MAY						
19...	56	70	75	82	91	100

07147800 WALNUT RIVER AT WINFIELD, KS

LOCATION.--Lat 37°13'27", long 96°59'40", in SW¼SW¼NE¼ sec.33, T.32 S., R.4 E., Cowley County, Hydrologic Unit 11030018, at downstream side of bridge on U.S. Highway 77, 1.0 mi (1.6 km) south of Winfield, 1.0 mi (1.6 km) upstream from Black Crook Creek, and at mile 24.8 (39.9 km).

DRAINAGE AREA.--1,872 mi^2 (4,848 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year. October to November 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 607: 1923(M). WSP 1117: Drainage area. WSP 1241: 1922(M), 1923, 1926-27, 1928-29(M), 1934, 1940-41.

GAGE.--Water-stage recorder. Datum of gage is 1,082.86 ft (330.056 m) above mean sea level (Corps of Engineers bench mark). Prior to Oct. 1, 1934, nonrecording gage on upstream side of former bridge just upstream from present gage at same datum.

REMARKS.--Records good. Some regulation at low flow by City Water Works Dam and Timber Creek Reservoir above station.

AVERAGE DISCHARGE.--56 years, 803 ft^3/s (22.74 m^3/s), 581,800 acre-ft/yr (717 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft^3/s (2,970 m^3/s) Apr. 23, 1944, gage height, 38.30 ft (11.674 m); no flow at times in 1929, 1936, 1954-56.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum floods known since at least 1877, that of Apr. 23, 1944; Nov. 18, 1928, discharge, 94,400 ft^3/s (2,670 m^3/s), gage height, 41.0 ft (12.50 m), from graph based on gage readings at former site.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,600 ft^3/s (272 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
May 24	0900	10,900	309	15.39	4.691
June 24	0700	*35,600	1,010	32.01	9.757

Minimum discharge, 10 ft^3/s (0.28 m^3/s) Nov. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	57	35	37	54	54	124	1420	7790	1960	142	553
2	39	60	35	36	52	50	102	1320	3430	1540	145	5560
3	36	58	38	36	51	50	79	1090	1680	1180	131	5130
4	33	45	36	39	48	45	63	704	1150	928	145	1720
5	55	33	37	40	49	43	48	522	845	759	315	1120
6	40	26	41	40	49	42	42	411	654	639	492	892
7	34	20	41	40	49	42	37	337	528	533	372	714
8	32	15	45	39	47	42	34	293	449	484	251	585
9	30	13	44	38	49	42	32	269	390	489	192	502
10	28	12	45	37	52	46	26	241	341	637	163	441
11	28	12	42	36	58	53	21	216	302	458	1850	408
12	26	13	40	35	71	41	16	193	271	375	5630	391
13	26	13	38	35	60	43	2170	167	246	335	3420	446
14	26	14	38	35	56	43	4080	146	228	298	2810	1060
15	26	19	39	35	54	43	1290	128	228	262	1830	928
16	20	29	40	35	54	42	1210	120	237	245	817	657
17	17	32	40	35	52	43	1440	142	211	222	1830	507
18	17	30	40	35	52	45	1010	139	269	204	2720	435
19	17	28	39	35	49	39	836	157	847	192	5150	375
20	17	30	38	37	45	32	606	251	1150	186	1850	330
21	17	32	38	41	41	32	453	4040	5050	181	1020	297
22	14	32	39	43	41	32	360	6310	13300	192	765	277
23	22	32	41	55	48	31	310	9020	23500	192	3550	258
24	24	33	41	56	47	31	269	10300	34300	202	4200	251
25	18	36	40	59	50	32	232	5240	26000	228	1900	259
26	20	39	38	61	57	35	201	2120	9900	213	1200	238
27	28	37	39	58	64	41	177	1460	4940	197	800	221
28	30	35	40	56	63	82	156	1380	3990	183	640	206
29	34	36	40	55	---	166	156	3380	3110	174	940	308
30	51	36	38	54	---	324	760	5090	2510	156	1100	498
31	55	---	37	56	---	182	---	7270	---	158	740	---
TOTAL	901	907	1222	1329	1462	1868	16340	63876	147846	14002	47110	25567
MEAN	29.1	30.2	39.4	42.9	52.2	60.3	545	2061	4928	452	1520	852
MAX	55	60	45	61	71	324	4080	10300	34300	1960	5630	5560
MIN	14	12	35	35	41	31	16	120	211	156	131	206
AC-FT	1790	1800	2420	2640	2900	3710	32410	126700	293300	27770	93440	50710

CAL YR 1976 TOTAL 230649 MEAN 630 MAX 40500 MIN 12 AC-FT 457500
WTR YR 1977 TOTAL 322430 MEAN 883 MAX 34300 MIN 12 AC-FT 639500

07147800 WALNUT RIVER AT WINFIELD, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1961 to September 1969.
WATER TEMPERATURES: October 1961 to September 1975.
SUSPENDED-SEDIMENT RECORDS: September 1961 to September 1975.

REMARKS.--Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR					
20...	1430	605	580	130	212
MAY					
27...	1530	1510	340	451	1840
JUN					
23...	1530	26300	106	1110	78800
24...	0935	34300	158	458	42400
AUG					
31...	1500	717	610	124	240

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
JUN								
23...	1530	26300	1110	75	75	85	98	100

07149000 MEDICINE LODGE RIVER NEAR KIOWA, KS

LOCATION.--Lat 37°02'17", long 98°28'04", in SE¼SW¼ sec.36, T.34 S., R.11 W., Barber County, Hydrologic Unit 11060003, at downstream side of bridge on State Highway 14, 200 ft (61 m) downstream from the Atchison, Topeka and Santa Fe Railway Co. bridge, 1.5 mi (2.4 km) northeast of Kiowa, and at mile 22.2 (35.7 km).

DRAINAGE AREA.--903 mi² (2,340 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1895 to October 1896, October 1937 to September 1950, October 1954 to September 1955, June 1959 to current year. Published as Medicine River near Kiowa 1895-96. All figures of discharge above 2,000 ft³/s (57 m³/s) for June and July 1896, published in Eighteenth Annual Report of the Geological Survey (Part 4), have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1391: 1938(M), 1942(M). WSP 1921: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,286.99 ft (382.275 m) above mean sea level (levels by Corps of Engineers). May 1895 to October 1896, nonrecording gage at site 2.0 mi (3.2 km) upstream at different datum. Feb. 11 to Mar. 2, 1938, nonrecording gage and Mar. 3, 1938, to Sept. 30, 1944, water-stage recorder at present site at datum 3.00 ft (0.914 m) higher. Oct. 1, 1944, to Sept. 30, 1950, and Oct. 1, 1954, to Sept. 30, 1955, water-stage recorder at present site and datum.

REMARKS.--Records fair, except those for winter periods, which are poor.

AVERAGE DISCHARGE.--22 years (water years 1938-50, 1955, 1960-77), 138 ft³/s (3.908 m³/s), 99,980 acre-ft/yr (123 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s (453 m³/s) Oct. 22, 1941, gage height, 11.75 ft (3.581 m), present datum; maximum gage height, 12.10 ft (3.688 m) Oct. 12, 1973; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of May 8, 1922, and June 1957 reached stages of about 16 ft (4.9 m) and 15.5 ft (4.7 m), respectively, present site and datum, from the Atchison, Topeka and Santa Fe Railway Co. records and information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,190 ft³/s (62.0 m³/s) May 23, gage height, 7.62 ft (2.323 m), no peak above base of 3,700 ft³/s (104 m³/s); minimum, 1.0 ft³/s (0.028 m³/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	76	64	61	80	64	78	176	104	48	6.0	142
2	28	74	74	55	85	68	78	106	198	42	9.5	317
3	22	68	84	51	90	72	78	92	306	32	8.5	146
4	19	66	80	47	95	80	76	94	152	26	10	108
5	19	64	72	48	104	76	78	88	116	23	17	102
6	20	64	70	50	98	78	78	84	96	22	15	94
7	23	62	50	47	88	80	74	86	84	18	11	84
8	26	62	64	44	80	82	74	80	80	28	7.5	76
9	28	64	76	39	86	70	72	76	70	24	5.0	70
10	28	64	80	36	90	70	70	70	60	18	2.8	62
11	26	64	58	34	80	76	66	64	56	17	7.0	58
12	25	64	72	33	78	76	62	58	52	14	7.0	66
13	25	64	72	34	76	78	82	54	50	12	9.0	504
14	25	64	76	35	76	72	96	50	46	10	51	868
15	24	64	78	35	72	70	96	48	40	9.5	68	266
16	23	63	76	34	74	68	90	46	34	8.0	34	276
17	24	63	78	34	84	66	96	58	30	6.5	40	853
18	25	63	76	36	76	66	106	70	29	5.3	34	248
19	29	63	74	38	64	66	112	54	29	4.2	50	146
20	32	63	70	40	58	64	126	106	28	3.6	52	116
21	34	63	44	43	58	64	130	651	26	3.2	50	106
22	36	63	44	46	62	64	134	281	24	4.6	58	98
23	36	62	66	50	66	66	128	1270	28	3.6	98	92
24	36	62	88	54	68	66	116	626	379	2.2	249	88
25	38	62	92	58	70	66	102	385	185	1.5	110	86
26	40	62	90	62	66	66	98	210	138	6.5	78	80
27	46	50	88	68	62	68	90	170	92	6.5	62	74
28	52	50	84	72	64	82	82	154	76	5.0	120	70
29	60	50	80	70	---	96	84	136	66	3.9	706	72
30	76	55	74	68	---	90	318	122	56	2.2	300	74
31	80	---	66	75	---	78	---	112	---	2.8	186	---
TOTAL	1035	1878	2262	1497	2148	2248	2970	5677	2730	413.1	2511.3	5442
MEAN	33.4	62.6	73.0	48.3	76.7	72.5	99.0	183	91.0	13.3	81.0	181
MAX	80	76	92	75	104	96	318	1270	379	48	706	868
MIN	19	50	44	33	58	64	62	46	24	1.5	2.8	58
AC-FT	2050	3730	4490	2970	4260	4460	5890	11260	5410	819	4980	10790

CAL YR 1976 TOTAL 37541.87 MEAN 103 MAX 2520 MIN 0 AC-FT 74460
WTR YR 1977 TOTAL 30811.40 MEAN 84.4 MAX 1270 MIN 1.5 AC-FT 61110

07149000 MEDICINE LODGE RIVER NEAR KIOWA, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1973 to current year.
WATER TEMPERATURES: October 1954 to September 1955, October 1973 to current year.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since October 1973.

REMARKS.--In addition to water-quality monitor, samples were collected by a local observer. Observer samples were used to interpret periods of monitor malfunctions. Sediment samples are collected only at selected flow conditions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,570 micromhos July 21, 1974; minimum, 370 micromhos May 23, 1977.
WATER TEMPERATURES: Maximum, 35.0°C July 16, 29, 1955; minimum, 0.0°C on several days during winter periods.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 182 micromhos was observed July 5, 1955.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,480 micromhos Aug. 4; minimum daily, 370 micromhos May 23.
WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 11; minimum daily, 0.5°C on several days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
JAN												
14...	36	985	7.5	.0	3	390	180	120	22	65	1.4	3.2
FEB												
03...	92	750	7.7	1.0	20	300	120	92	17	44	1.1	2.8
MAR												
02...	70	865	8.1	10.0	10	320	140	97	20	58	1.4	3.3
APR												
07...	74	860	7.9	24.0	15	320	140	98	19	53	1.3	3.6
MAY												
05...	88	900	7.9	22.5	110	350	170	110	18	54	1.3	4.2
JUL												
08...	23	1130	7.9	24.0	25	390	230	110	28	98	2.2	4.9
AUG												
05...	18	1330	7.9	23.5	10	460	330	130	34	110	2.2	6.2
SEP												
14...	1070	485	7.9	19.0	1200	220	150	76	8.4	15	.4	5.4

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
JAN												
14...	257	0	180	84	.4	16	632	.86	61.6	--	--	--
FEB												
03...	225	0	140	56	.4	15	471	.64	118	1.2	.52	.11
MAR												
02...	222	0	150	81	.3	11	556	.76	105	--	--	--
APR												
07...	220	0	160	64	.4	13	526	.72	105	--	--	--
MAY												
05...	220	0	180	67	.5	16	573	.78	137	.41	1.8	.25
JUL												
08...	200	0	260	130	.4	15	763	1.04	47.4	--	--	--
AUG												
05...	160	0	380	150	.5	15	959	1.30	46.6	.01	.89	.04
SEP												
14...	89	0	150	18	.4	11	344	.47	994	--	--	--

07149000 MEDICINE LODGE RIVER NEAR KIOWA, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
NOV			
02...	1245	14.0	71
DEC			
03...	0930	1.0	60
07...	1230	1.0	74
23...	1220	2.5	88
27...	1100	3.0	66
JAN			
14...	1210	.0	84
23...	1230	2.5	54
FEB			
01...	1205	1.0	102
03...	1150	1.0	56
04...	1540	3.5	58
06...	1230	9.0	68
MAR			
01...	1420	8.5	84
02...	1544	10.0	87
02...	1715	10.0	81
06...	1730	13.5	88
14...	1330	18.0	60
20...	1200	10.0	72
25...	1400	19.5	68
31...	1330	14.0	60

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
APR			
01...	1310	16.0	68
05...	1300	14.0	71
07...	1500	24.0	64
13...	1245	15.0	58
30...	1310	25.5	46
MAY			
01...	1845	27.0	60
03...	1230	26.0	69
05...	1045	22.5	67
06...	1220	24.0	70
16...	1115	24.5	82
17...	1345	23.0	84
23...	1800	--	23
26...	1630	23.0	54
31...	1220	23.0	84
JUN			
01...	1315	29.0	89
03...	1130	25.0	34
11...	0845	22.5	120
17...	1100	24.5	140
29...	1200	25.5	30
JUL			
01...	1215	26.5	92

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
JUL			
05...	1430	32.0	133
08...	0930	24.0	130
08...	1400	32.5	148
16...	1045	28.5	140
18...	1115	29.5	150
26...	1200	26.0	130
AUG			
01...	1100	26.5	180
02...	1655	32.5	174
05...	1045	23.5	150
13...	1100	21.5	130
18...	1130	23.5	96

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
AUG			
24...	1100	25.5	20
25...	1145	25.0	32
31...	1115	25.0	34
SEP			
03...	0930	25.0	26
07...	1300	28.0	51
14...	0905	19.0	18
15...	1130	20.5	32
16...	1030	21.0	35
22...	0930	21.5	67
28...	1015	21.0	81

07149000 MEDICINE LODGE RIVER NEAR KIOWA, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	902	744	884	814	870	853	1160	1030	1040	1430	689
2	1000	880	871	880	749	860	859	1020	1020	1090	1360	658
3	880	846	801	879	752	850	860	966	922	1130	1430	656
4	7 0	812	809	843	776	840	860	913	930	1170	1480	518
5	730	806	845	815	777	830	870	846	1050	1230	1340	776
6	760	770	801	773	749	820	843	856	1080	1280	1230	874
7	850	725	790	730	765	830	854	943	1120	1220	1320	902
8	910	733	841	716	788	840	855	938	1120	1150	1400	924
9	980	733	871	780	789	850	864	933	1130	1170	1430	932
10	1000	812	811	879	803	860	873	948	1140	1260	1400	947
11	1010	820	753	936	787	870	890	960	1160	1290	1170	913
12	1020	840	814	949	775	880	892	926	1160	1320	1320	935
13	1020	860	856	897	768	888	739	895	1240	1350	1260	516
14	1010	880	869	828	793	870	798	929	1240	1370	1190	538
15	909	860	862	772	820	860	829	944	1240	1370	937	569
16	898	850	854	767	848	850	832	977	1260	1370	1010	614
17	931	840	847	742	843	849	823	988	1280	1360	930	704
18	952	820	852	733	858	858	795	873	1290	1350	956	780
19	905	800	856	712	903	859	803	865	1300	1270	875	857
20	866	820	889	692	859	884	825	943	1310	1290	891	921
21	897	840	931	712	848	875	850	451	1320	1270	944	973
22	894	860	986	734	821	873	875	792	1310	1270	888	989
23	816	872	954	722	808	862	930	370	1300	1270	831	1000
24	790	876	893	658	844	851	905	620	488	1300	619	1020
25	749	866	863	669	834	854	884	570	712	1290	594	1030
26	799	862	833	697	844	856	884	690	838	1200	884	1040
27	969	800	846	684	854	858	889	821	838	1320	989	1050
28	926	774	857	730	860	802	895	920	965	1290	406	1050
29	921	861	863	895	---	805	889	957	826	1230	494	1060
30	928	837	892	824	---	808	603	985	960	1280	568	1040
31	893	---	888	858	---	704	---	1010	---	1320	591	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	13.0	5.0	0.5	0.5	12.5	16.0	27.0	24.0	26.5	30.0	27.0
2	23.0	10.5	1.0	0.5	1.0	14.0	17.0	25.0	25.0	31.0	31.0	26.5
3	18.5	8.0	1.0	0.5	2.5	13.0	13.0	27.5	25.0	28.5	32.5	27.0
4	14.5	7.5	1.5	0.5	3.5	13.0	9.0	26.5	26.5	25.5	26.5	25.0
5	17.0	8.5	2.0	0.5	4.0	12.0	8.0	25.5	23.5	27.0	25.5	26.0
6	15.0	8.5	3.5	0.5	4.0	14.0	10.0	29.5	23.5	27.5	28.5	27.0
7	12.0	9.5	3.0	0.5	2.0	15.5	14.5	29.0	23.5	29.0	29.0	27.0
8	12.0	10.5	2.0	0.5	4.0	19.0	17.0	23.0	24.5	31.5	29.0	27.0
9	15.0	9.5	2.0	0.5	6.0	20.0	16.0	26.0	27.0	28.5	27.5	23.0
10	17.0	10.0	1.5	0.5	8.5	20.0	16.0	29.0	29.5	28.0	31.5	30.0
11	17.0	7.0	0.5	0.5	9.0	16.5	15.0	28.5	31.0	28.5	33.0	27.0
12	16.0	5.0	1.0	0.5	10.0	14.0	17.0	24.5	30.0	29.0	30.5	25.0
13	18.0	4.0	1.5	0.5	10.0	19.0	15.0	25.0	30.5	27.5	29.5	30.5
14	14.0	5.0	3.0	0.5	10.0	20.0	17.0	27.0	30.0	26.5	27.0	23.0
15	13.0	5.0	3.0	0.5	6.0	21.0	19.0	27.5	29.5	27.5	28.0	18.0
16	14.0	6.0	3.5	0.5	6.0	17.0	16.0	24.5	27.5	28.0	28.5	19.0
17	16.0	8.0	5.0	0.5	9.0	19.0	19.0	27.0	27.0	27.5	30.5	15.0
18	18.0	11.0	5.0	0.5	11.0	19.5	17.5	26.0	25.5	30.0	29.0	18.5
19	18.5	12.0	5.0	0.5	12.5	13.0	17.5	26.5	27.0	30.0	29.0	21.0
20	19.0	11.0	1.0	0.5	12.0	10.0	18.0	28.0	28.0	30.0	30.0	19.5
21	19.5	10.0	1.0	0.5	10.5	10.0	14.5	29.0	26.0	32.5	29.5	20.0
22	18.0	8.5	1.0	0.5	15.5	13.0	15.0	26.0	24.5	31.0	28.0	20.0
23	15.0	10.5	1.0	0.5	15.0	18.0	17.0	28.5	23.5	29.0	27.5	16.5
24	12.5	5.5	1.5	1.0	14.0	18.0	19.5	26.0	23.0	28.0	27.0	17.0
25	11.0	7.0	2.0	1.0	13.5	19.5	21.5	27.0	25.5	30.5	27.0	15.5
26	9.5	7.0	2.5	1.0	12.5	19.5	24.0	26.5	27.5	31.5	27.0	20.5
27	8.0	1.0	4.0	1.0	11.5	19.0	25.5	23.0	28.0	25.5	25.5	17.0
28	8.0	1.0	4.5	1.0	13.5	17.0	26.0	26.5	29.5	27.0	26.5	15.5
29	10.5	1.0	3.0	1.0	---	15.0	24.0	24.5	28.5	28.0	25.5	15.0
30	11.5	1.0	1.0	0.5	---	15.0	25.0	23.5	29.5	28.5	25.0	16.5
31	16.0	---	1.0	1.0	---	14.0	---	23.0	---	30.5	26.5	---

07149000 MEDICINE LODGE RIVER NEAR KIOWA, KS--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
FEB					
03...	1410	92	670	15	3.8
APR					
07...	1015	74	--	70	14
MAY					
05...	0950	88	760	275	66
22...	1500	218	--	610	359
SEP					
14...	1045	878	--	2130	5050

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
SEP								
14...	1045	878	2130	71	81	95	98	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	NUMBER OF SAMPLING POINTS	SUSPENDED SEDIMENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM
APR								
07...	1015	7	70	0	6	71	96	100

07151500 CHIKASKIA RIVER NEAR CORBIN, KS

LOCATION.--Lat 37°07'44", long 97°36'04", on NW¼SW¼SW¼ sec.36, T.33 S., R.3 W., Sumner County, Hydrologic Unit 11060005, near left bank on downstream side of pier of bridge on State Highway 29, 1 mi (2 km) upstream from Prairie Creek, 3 mi (5 km) west of Corbin, and at mile 67.5 (109 km).

DRAINAGE AREA.--794 mi² (2,060 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1950 to September 1965, October 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,108.00 ft (337.718 m) above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to Mar. 23, 1951, wire-weight gage at same site and datum.

REMARKS.--Records fair except those for winter months, which are poor.

AVERAGE DISCHARGE.--17 years (water years 1951-65, 1976-77), 215 ft³/s (6.089 m³/s), 155,800 acre-ft/yr (192 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft³/s (1,079 m³/s) May 17, 1957, gage height, 22.31 ft (6.800 m); no flow at times in 1953-54, 1956, 1963, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	2100	5,180	147	10.22	3.115
May 23	2400	7,610	216	12.10	3.688
Aug. 20	0600	2,680	75.9	7.63	2.326
Aug. 23	1900	4,580	130	9.67	2.947
Sept. 2	1500	*21,200	600	18.25	5.563
Sept. 13	2000	3,340	94.6	8.40	2.560

Minimum daily discharge, 11 ft³/s (0.312 m³/s) Dec. 31, Jan. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	60	24	11	44	63	63	68	310	66	55	965
2	27	55	28	12	46	63	57	66	252	57	51	14900
3	24	46	29	13	47	66	95	60	455	54	51	3820
4	22	41	27	14	48	64	55	56	316	48	41	1110
5	24	40	20	15	50	62	55	55	247	46	35	854
6	24	42	14	16	54	68	53	55	190	39	32	704
7	26	43	12	17	60	60	51	55	164	39	28	588
8	27	39	12	19	66	61	48	50	145	60	23	515
9	27	39	12	20	82	60	46	46	128	55	19	458
10	27	39	13	21	80	60	43	43	118	46	18	407
11	26	38	14	23	79	60	42	41	108	42	22	388
12	24	37	17	25	79	59	39	38	96	35	29	369
13	20	38	20	27	76	60	47	37	96	32	38	1550
14	19	39	25	30	74	68	69	36	96	28	38	1500
15	19	40	35	31	72	61	62	36	95	25	42	678
16	19	42	43	34	70	57	86	37	91	23	44	1090
17	19	43	43	36	71	55	82	38	88	20	663	1450
18	22	43	41	39	71	54	96	41	82	19	1050	641
19	29	41	41	43	70	52	264	43	76	18	423	451
20	32	39	37	45	69	50	227	66	72	18	1780	370
21	32	40	25	48	69	48	152	2260	69	18	433	323
22	36	41	17	53	68	43	143	2300	74	24	212	291
23	36	40	18	57	68	43	123	3670	76	43	2690	265
24	36	42	20	60	68	43	108	3480	76	30	1390	246
25	36	43	22	67	67	42	96	829	102	25	588	229
26	36	44	24	72	68	42	86	535	193	56	372	214
27	39	44	27	74	65	44	77	429	139	26	279	202
28	41	30	30	54	64	57	71	546	102	25	621	194
29	46	20	33	47	---	66	73	865	88	26	745	190
30	67	21	15	46	---	84	73	459	74	27	726	190
31	67	---	11	45	---	74	---	481	---	46	634	---
TOTAL	960	1209	749	1114	1845	1801	2560	16821	4218	1116	13172	35152
MEAN	31.0	40.3	24.2	35.9	65.9	58.1	85.3	543	141	36.0	425	1172
MAX	67	60	43	74	82	84	264	3670	455	66	2690	14900
MIN	19	20	11	11	44	42	39	36	69	18	18	190
AC-FT	1900	2400	1490	2210	3660	3570	5080	33360	8370	2210	26130	69720

CAL YR 1976 TOTAL 42934 MEAN 117 MAX 3780 MIN 11 AC-FT 85160
WTR YR 1977 TOTAL 80717 MEAN 221 MAX 14900 MIN 11 AC-FT 160100

07155590 CIMARRON RIVER NEAR ELKHART, KS

LOCATION.--Lat 37°07'30", long 101°53'50", in NW¼NW¼ sec.4, T.34 S., R.42 W., Morton County, Hydrologic Unit 11040002, Cimarron National Grasslands, on downstream side of bridge near left end on State Highway 27, 8.0 mi (12.9 km) north of Elkhart, and at mile 499.4 (803.5 km).

DRAINAGE AREA.--2,899 mi² (7,508 km²), of which 483 mi² (1,251 km²) do not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,301.89 ft (1,030.800 m) above mean sea level.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--6 years, 23.6 ft³/s (0.668 m³/s), 17,100 acre-ft/yr (21.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s (609 m³/s) May 26, 1977, gage height, 9.17 ft (2.795 m), no flow most days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 13	0600	1,580	44.7	4.28	1.304	July 27	1800	2,440	69.1	4.85	1.478
Apr. 20	1600	4,750	135	5.68	1.731	Aug. 6	2300	2,440	69.1	4.85	1.478
May 15	unknown	9,650	273	7.10	2.164	Aug. 19	1500	2,100	59.5	4.67	1.423
May 18	2300	1,920	54.4	4.47	1.362	Aug. 21	0900	1,230	34.8	4.13	1.259
May 26	0500	*21,500	609	9.17	2.795	Sept. 1	2400	1,400	39.6	4.25	1.295
July 26	1400	2,060	58.3	4.65	1.417						

Minimum discharge, no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	.00	.00	.00	.00	.00	.00	9.0	149	5.5	180	129
2	.00	.00	.00	.00	.00	.00	.00	8.0	71	4.8	193	543
3	.00	.00	.00	.00	.00	.00	.00	7.0	46	4.4	180	134
4	.00	.00	.00	.00	.00	.00	.00	6.0	32	3.7	107	59
5	.00	.00	.00	.00	.00	.00	.00	5.3	26	2.6	63	176
6	.00	.00	.00	.00	.00	.00	.00	3.2	17	3.4	311	141
7	.00	.00	.00	.00	.00	.00	.00	2.6	12	5.0	745	76
8	.00	.00	.00	.00	.00	.00	.00	2.6	8.4	7.1	282	32
9	.00	.00	.00	.00	.00	.00	.00	129	5.5	5.0	142	25
10	.00	.00	.00	.00	.00	.00	.00	23	4.1	4.1	45	16
11	.00	.00	.00	.00	.00	.00	.00	5.5	3.9	2.9	19	16
12	.00	.00	.00	.00	.00	.00	93	3.0	4.8	2.8	21	17
13	.00	.00	.00	.00	.00	.00	906	2.6	4.8	1.5	89	38
14	.00	.00	.00	.00	.00	.00	46	2.6	4.4	.44	273	85
15	.00	.00	.00	.00	.00	.00	2.2	3600	3.7	.00	100	46
16	.00	.00	.00	.00	.00	.00	.50	530	3.2	.00	27	37
17	.00	.00	.00	.00	.00	.00	.28	278	3.2	.00	18	27
18	.00	.00	.00	.00	.00	.00	.18	492	2.0	.00	77	19
19	.00	.00	.00	.00	.00	.00	.26	551	1.5	.00	632	14
20	.00	.00	.00	.00	.00	.00	1110	261	1.0	.00	304	10
21	.00	.00	.00	.00	.00	.00	651	449	1.0	.00	440	8.7
22	.00	.00	.00	.00	.00	.00	168	400	52	.00	165	8.0
23	.00	.00	.00	.00	.00	.00	80	524	22	.00	356	5.7
24	.00	.00	.00	.00	.00	.00	40	347	62	22	180	2.0
25	.00	.00	.00	.00	.00	.00	25	694	19	28	67	1.0
26	.00	.00	.00	.00	.00	.00	20	6190	13	519	30	.00
27	.00	.00	.00	.00	.00	.00	17	569	9.3	889	17	.00
28	.00	.00	.00	.00	.00	.00	14	385	7.4	950	12	.00
29	.00	.00	.00	.00	---	.00	12	207	6.2	496	8.0	.00
30	.00	.00	.00	.00	---	.00	10	165	6.0	396	7.0	.00
31	.00	---	.00	.00	---	.00	---	237	---	237	16	---
TOTAL	.42	.00	.00	.00	.00	.00	3195.42	16088.4	601.4	3502.44	5106.0	1665.40
MEAN	.014	.000	.000	.000	.000	.000	107	519	20.0	113	165	55.5
MAX	.42	.00	.00	.00	.00	.00	1110	6190	149	950	745	543
MIN	.00	.00	.00	.00	.00	.00	.00	2.6	1.0	.00	7.0	.00
AC-FT	.8	.00	.00	.00	.00	.00	6340	31910	1190	6950	10130	3300

CAL YR 1976 TOTAL 4882.85 MEAN 13.3 MAX 1040 MIN .00 AC-FT 9690
WTR YR 1977 TOTAL 30159.48 MEAN 82.6 MAX 6190 MIN .00 AC-FT 59820

07156010 NORTH FORK CIMARRON RIVER AT RICHFIELD, KS

LOCATION.--Lat 37°15'30", long 101°46'30", in SE¼SE¼ sec.16, T.32 S., R.41 W., Morton County, Hydrologic Unit 11040003, at downstream side of bridge on State Highway 51, at Richfield, and at mile 85.8 (138.1 km).

DRAINAGE AREA.--463 mi² (1,199 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,343.5 ft (1,019.10 m) above mean sea level.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--6 years, 10.2 ft³/s (0.289 m³/s), 7,390 acre-ft/yr (9.11 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,000 ft³/s (906 m³/s), revised, Apr. 27, 1976, gage height, 17.50 ft (5.334 m); no flow most days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 10	1200	1,540	43.6	14.83	4.520	Aug. 21	1000	193	5.47	8.00	2.438
May 15	0700	292	8.27	9.40	2.865	Sept. 3	0100	* 1,860	52.7	15.25	4.648
May 18	2200	1,420	40.2	14.63	4.459	Sept. 12	2000	472	13.4	11.15	3.399
May 21	0600	1,190	33.7	14.22	4.334	Sept. 16	0800	260	7.36	9.00	2.743
Aug. 9	0500	232	6.57	8.60	2.621						

Minimum discharge, no flow many days.

REVISIONS.--The maximum discharge for the water year 1976 has been revised to 32,000 ft³/s (906 m³/s) April 27, 1976, gage height, 17.50 ft (5.334 m); revised daily discharges in cubic feet per second, for the high-water periods in April and May 1976, are given below. These figures supersede those published in the report for 1976.

April 27....1,310 April 28....6,100 May 26....1,700

Month	Total	Mean	Max	Min	Ac-ft
April 1976	8,383.84	279	6,100	0	16,630
May 1976	1,944.49	62.7	1,700	0	3,860
Cal yr 1975	542.26	1.49	133	0	1,080
Wtr yr 1976	11,099.06	30.4	6,100	0	22,020

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	172
3	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00	616
4	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	12
5	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.20
6	.00	.12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.92	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	54	.00
10	.00	.00	.00	.00	.00	.00	.00	498	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	81	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	2.0	.00	.00	.00	80
13	.00	.16	.00	.00	.00	.00	.00	.00	.00	.00	.00	24
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	29
15	.00	.00	.00	.00	.00	.00	.00	97	.00	.00	.00	6.2
16	.00	.00	.00	.00	.00	.00	.00	3.5	.00	.00	.00	95
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.0	1.5
18	.00	.00	.00	.00	.00	.00	.00	262	.00	.00	2.0	.00
19	.00	.00	.00	.00	.00	.00	.00	580	.00	.00	1.7	.00
20	.00	.00	.00	.00	.00	.00	.00	29	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	1.4	647	.00	.00	64	.00
22	.00	.00	.00	.00	.00	.00	2.9	139	.00	.00	7.8	.00
23	.00	.00	.00	.00	.00	.00	1.8	1.4	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	6.9	---	.00	.15	---
TOTAL	.00	.76	.00	.00	.00	.00	6.10	2346.80	.00	.00	136.57	1035.90
MEAN	.000	.025	.000	.000	.000	.000	.20	75.7	.000	.000	4.41	34.5
MAX	.00	.18	.00	.00	.00	.00	2.9	647	.00	.00	64	616
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	1.5	.00	.00	.00	.00	12	4650	.00	.00	271	2050

CAL YR 1976 TOTAL 11087.92 MEAN 30.3 MAX 6100 MIN .00 AC-FT 21990
WTR YR 1977 TOTAL 3526.13 MEAN 9.66 MAX 647 MIN .00 AC-FT 6990

07156010 NORTH FORK CIMARRON RIVER AT RICHFIELD, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY					
15...	1145	127	220	3920	1340
15...	1825	41	210	3220	356
19...	1450	258	200	3070	2140
AUG					
09...	1405	9.4	220	2280	58

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
MAY								
15...	1145	127	3920	64	85	93	99	100

07156100 SAND ARROYO CREEK NEAR JOHNSON, KS

LOCATION.--Lat 37°30'00", long 101°45'40", in SW¼NW¼ sec.25, T.29 S., R.41 W., Stanton County, Hydrologic Unit 11040004, at bridge on State Highway 27, 4.3 mi (6.9 km) south of Johnson, and at mile 22.5 (36.2 km).

DRAINAGE AREA.--619 mi² (1,603 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1971 to current year. Prior to Oct. 1, 1972 published as "Sandy Arroyo Creek near Johnson".

GAGE.--Water-stage recorder. Datum of gage is 3,328.40 ft (1,014.496 m) above mean sea level.

REMARKS.--Records good above 4.0 ft³/s, poor below.

AVERAGE DISCHARGE.--6 years, 0.20 ft³/s (0.006 m³/s), 145 acre-ft/yr (0.179 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 520 ft³/s (14.7 m³/s) May 29, 1975, gage height, 6.5 ft (1.98 m), from floodmark; no flow most days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 371 ft³/s (10.51 m³/s) Sept. 12, gage height, 6.10 ft (1.859 m) no other peak above base of 50 ft³/s (1.42 m³/s); no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	41
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	27
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	4.9	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.71	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	2.5	9.0	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	2.50	14.71	.00	.00	.00	68.00
MEAN	.000	.000	.000	.000	.000	.000	.083	.47	.000	.000	.000	2.27
MAX	.00	.00	.00	.00	.00	.00	2.5	9.0	.00	.00	.00	41
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	5.0	29	.00	.00	.00	135

CAL YR 1976 TOTAL 8.06 MEAN .022 MAX 4.8 MIN .00 AC-FT 16
WTR YR 1977 TOTAL 85.21 MEAN .23 MAX 41 MIN .00 AC-FT 169

07156220 BEAR CREEK NEAR JOHNSON, KS

LOCATION.--Lat 37°37'35", long 101°45'40", in NW¼SW¼ sec.12, T.28 S., R.41 W., Stanton County, Hydrologic Unit 11040005, at bridge on U.S. Highway 270, 3.5 mi (5.6 km) north of Johnson, and at mile 42.0 (67.6 km).

DRAINAGE AREA.--835 mi² (2,163 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,292.44 ft (1,003.536 m) above mean sea level.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--11 years, 5.01 ft³/s (0.142 m³/s), 3,630 acre-ft/yr (4.48 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft³/s (195 m³/s) May 11, 1972, gage height, 9.10 ft (2.774 m); no flow most days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 360 ft³/s (10.2 m³/s) May 2, gage height, 5.76 ft (1.756 m); no peak above base of 500 ft³/s (14.2 m³/s); minimum, no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	96	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.83	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	61	.00	.00	.00	.00	42
14	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	58
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	26	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	3.7	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	42	65	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	5.1	1.0	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	108.94	194.70	.00	.00	.00	100.00
MEAN	.000	.000	.000	.000	.000	.000	3.63	6.28	.000	.000	.000	3.33
MAX	.00	.00	.00	.00	.00	.00	61	96	.00	.00	.00	58
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	216	386	.00	.00	.00	198

CAL YR 1976 TOTAL 2259.75 MEAN 6.45 MAX 1310 MIN .00 AC-FT 4680
WTR YR 1977 TOTAL 403.64 MEAN 1.11 MAX 96 MIN .00 AC-FT 801

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--No flow on many days during period of record. Sediment samples are collected only at selected flow conditions.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR					
21...	1200	113	430	14300	4360

07157500 CROOKED CREEK NEAR NYE, KS

LOCATION.--Lat 37°02'02", long 100°11'55", in SE¼NW¼ sec.1, T.35 S., R.27 W., Meade County, Hydrologic Unit 11040007, on left bank at upstream side of county road bridge, 6.5 mi (10.5 km) east of Nye, and at mile 14.0 (22.5 km).

DRAINAGE AREA.--1,157 mi² (2,997 km²), of which 344 mi² (891 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1211: 1950. WSP 1311: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 2,163.79 ft (659.523 m) above mean sea level, unadjusted. Prior to Sept. 12, 1942, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are poor. Extensive diversion for irrigation above station.

AVERAGE DISCHARGE.--35 years, 42.3 ft³/s (1.198 m³/s), 30,650 acre-ft/yr (37.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) May 20, 1955, gage height, 8.01 ft (2.441 m); right-bank gage, from rating curve extended above 2,400 ft³/s (68.0 m³/s) on basis of contracted-opening measurement of peak flow at site 10 mi (16 km) upstream and a mean of slope-area measurement at gage site and discharge measurement at site 10 mi (16 km) upstream at gage height 7.59 ft (2.313 m); maximum stage, 9.00 ft (2.743 m) Aug. 31, 1963, at left-bank gage, 8.2 ft (2.50 m), floodmark, at right-bank gage; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 876 ft³/s (24.8 m³/s) Aug. 19, gage height, 5.75 ft (1.753 m); no peak above base of 1,400 ft³/s (39.6 m³/s); minimum discharge, no flow July 4, July 12 to Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	7.9	3.5	6.5	17	12	10	12	27	1.3	.00	142
2	4.7	7.9	4.5	6.5	17	13	9.3	58	17	1.2	.00	52
3	4.4	7.9	4.5	6.5	15	12	9.6	31	14	.66	.00	30
4	5.0	8.4	4.5	6.0	15	12	10	18	12	.06	.00	22
5	6.0	8.4	4.0	6.0	15	12	10	33	10	.00	.00	18
6	6.5	7.9	4.0	5.8	15	12	10	51	9.5	.01	.00	16
7	7.0	7.9	4.0	5.0	14	11	9.7	56	9.3	1.0	.00	14
8	7.4	8.4	4.0	5.0	14	11	8.6	52	8.6	1.1	.00	12
9	7.0	8.4	4.0	5.0	14	10	7.9	51	7.2	1.1	.00	11
10	6.5	7.9	4.0	5.0	13	10	7.8	47	6.4	1.0	.00	11
11	5.7	7.9	4.5	5.0	13	10	8.0	33	6.0	.59	.00	13
12	4.7	7.9	5.0	5.5	12	10	8.2	24	5.6	.00	.00	12
13	2.5	8.4	6.0	5.5	13	10	8.4	20	5.4	.00	.00	12
14	2.3	9.4	7.0	5.5	12	9.9	8.4	18	4.9	.00	.00	11
15	2.3	9.8	8.0	5.5	13	9.3	8.7	16	4.3	.00	.00	11
16	4.0	9.8	9.0	6.0	13	8.9	8.7	15	3.6	.00	.00	32
17	6.0	9.8	9.0	6.0	13	9.4	9.4	14	3.1	.00	.00	28
18	7.0	10	8.5	6.5	12	9.1	9.4	13	3.1	.00	.00	17
19	6.0	10	8.0	8.0	11	9.1	11	14	3.2	.00	157	14
20	5.7	10	7.5	9.0	11	9.2	30	17	3.0	.00	195	12
21	5.4	11	7.5	10	11	9.2	32	23	2.6	.00	64	11
22	5.4	11	8.0	10	12	9.8	30	17	2.3	.00	37	9.4
23	5.4	12	8.5	9.5	13	9.6	24	16	2.6	.00	26	10
24	5.0	12	9.5	9.0	13	9.7	19	15	2.8	.00	20	9.0
25	5.4	12	10	9.0	12	9.3	28	13	5.0	.00	16	8.3
26	5.7	12	11	9.0	12	9.3	19	13	5.3	.00	13	7.8
27	6.0	9.8	10	9.0	12	9.4	17	13	3.6	.00	12	7.3
28	6.5	8.0	8.0	9.5	12	9.1	15	12	2.4	.00	16	7.9
29	7.4	5.0	6.0	10	---	9.1	34	11	1.9	.00	14	8.4
30	7.4	3.0	5.5	12	---	10	20	11	1.5	.00	12	8.2
31	7.9	---	5.5	15	---	9.7	---	17	---	.00	13	---
TOTAL	172.6	269.8	203.0	231.8	369	314.1	441.1	754	193.2	8.02	595.00	577.3
MEAN	5.57	8.99	6.55	7.48	13.2	10.1	14.7	24.3	6.44	.26	19.2	19.2
MAX	7.9	12	11	15	17	13	34	58	27	1.3	195	142
MIN	2.3	3.0	3.5	5.0	11	8.9	7.8	11	1.5	.00	.00	7.3
AC-FT	342	535	403	460	732	623	875	1500	383	16	1180	1150

CAL YR 1976 TOTAL 6841.14 MEAN 18.7 MAX 236 MIN .00 AC-FT 13570
WTR YR 1977 TOTAL 4128.92 MEAN 11.3 MAX 195 MIN .00 AC-FT 8190

07157500 CROOKED CREEK NEAR NYE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
MAR 29...	9.9	3600	8.4	11.0	10	420	230	110	36	720	15	5.7
MAY 12...	26	2620	8.6	25.0	70	330	140	92	24	430	10	8.6
JUN 23...	2.4	4700	8.4	32.0	15	420	150	100	41	850	18	8.1
AUG 19...	705	320	7.6	19.5	1700	66	0	20	3.8	35	1.9	5.0
SEP 12...	10	4000	8.3	31.0	25	390	200	100	33	690	15	6.7

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR 29...	240	0	280	1000	1.2	16	2330	3.17	62.3	--	--	--
MAY 12...	230	0	100	710	.9	18	1500	2.04	105	.38	1.1	.46
JUN 23...	180	75	76	1400	1.2	13	2710	3.69	17.6	.01	.62	.04
AUG 19...	110	0	20	41	.4	7.0	173	.24	329	.58	4.9	1.6
SEP 12...	230	0	170	1100	1.2	21	2290	3.11	67.4	--	--	--

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
DEC 07...	1100	3.9	4500	9	.10
JAN 07...	1140	--	4000	11	--
FEB 03...	1415	16	3700	71	3.2
MAY 12...	1550	26	2620	3750	263
JUN 23...	1315	2.4	--	42	.27
AUG 19...	1955	705	--	3880	7390
20...	1350	142	--	1070	410
21...	1200	59	--	362	58

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
AUG 19...	1955	705	3880	60	78	89	92	92	96	100

07157740 CIMARRON RIVER NEAR BUTTERMILK, KS

LOCATION.--Lat 37°01'36", long 99°28'45", NW¼ sec.3, T.35 S., R.20 W., Comanche County, near left abutment of county highway bridge, 0.5 mi (0.8 km) downstream from Bluff Creek, 2.0 mi (3.2 km) north of Kansas-Oklahoma State line, 11.5 mi (18.5 km) southwest of Buttermilk, and at mile 304.8 (490.4 km).

DRAINAGE AREA.--11,120 mi² (28,800 km²), of which 4,737 mi² (12,270 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,704.57 ft (519.553 m) above mean sea level.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,690 ft³/s (189 m³/s) Sept. 26, 1973, gage height, 8.29 ft (2.527 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,680 ft³/s (75.9 m³/s) May 28, gage height, 5.46 ft (1.664 m), no peak above base of 3,000 ft³/s (85.0 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	25	18	12	144	22	3.1	30	318	.74	72	193
2	.30	22	17	11	159	22	2.8	205	302	.54	32	244
3	.24	21	68	10	150	20	2.8	529	309	.36	20	110
4	.18	21	112	9.0	122	14	2.8	310	220	.12	11	62
5	.12	21	82	6.0	105	12	2.5	132	169	.00	1.7	65
6	.30	21	60	3.0	92	11	2.2	95	147	.00	.90	92
7	.36	21	42	3.0	85	11	2.0	80	130	.12	.19	46
8	.36	24	35	3.0	82	9.7	2.0	72	120	1.3	.00	26
9	.30	25	62	3.0	78	8.7	2.2	75	112	.36	.00	17
10	.12	26	65	3.0	70	7.5	1.5	864	60	.18	23	10
11	.18	26	52	4.0	65	6.3	1.1	230	42	.00	189	11
12	.06	26	37	5.0	65	5.0	1.1	130	32	.00	122	21
13	.12	28	75	9.0	68	4.6	1.5	98	24	.00	322	35
14	.18	28	85	15	65	3.8	1.7	82	18	.00	126	117
15	.06	35	68	30	65	3.5	2.0	72	16	.00	24	125
16	.06	35	60	50	60	3.8	1.7	58	12	.00	7.5	280
17	.06	38	62	80	68	3.5	2.2	674	8.7	.00	32	237
18	.12	40	62	156	62	3.1	3.5	410	5.4	.00	15	120
19	.12	40	65	177	60	2.2	13	220	3.5	.00	32	68
20	.06	38	65	181	58	2.0	60	165	2.5	.00	138	40
21	.06	38	75	210	60	1.7	78	402	2.2	.00	141	24
22	.06	40	46	240	60	1.5	138	385	1.3	.00	117	17
23	.06	38	58	291	62	1.7	310	571	1.3	.00	105	13
24	.90	38	105	291	65	1.7	177	315	9.2	.00	54	11
25	4.2	40	85	245	62	1.7	115	378	24	.00	60	11
26	6.8	42	65	249	52	1.5	75	410	11	1.6	26	8.7
27	12	30	50	181	40	2.5	48	240	6.8	15	11	6.3
28	16	30	40	153	28	3.1	23	2060	2.5	.90	81	5.4
29	21	26	25	179	---	3.1	58	1090	2.5	.00	108	6.8
30	24	21	20	185	---	3.1	24	359	1.3	83	62	11
31	28	---	15	159	---	3.5	---	230	---	143	40	---
TOTAL	116.74	904	1776	3153.0	2152	200.8	1157.7	10971	2113.2	247.22	1973.29	2033.2
MEAN	3.77	30.1	57.3	102	76.9	6.48	38.6	354	70.4	7.97	63.7	67.8
MAX	28	42	112	291	159	22	310	2060	318	143	322	280
MIN	.06	21	15	3.0	28	1.5	1.1	30	1.3	.00	.00	5.4
AC-FT	232	1790	3520	6250	4270	398	2300	21760	4190	490	3910	4030

CAL YR 1976 TOTAL 34800.88 MEAN 95.1 MAX 4029 MIN .00 AC-FT 69030
WTR YR 1977 TOTAL 26798.15 MEAN 73.4 MAX 2060 MIN .00 AC-FT 53150

07157740 CIMARRON RIVER NEAR BUTTERMILK, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1973 to current year.
WATER TEMPERATURES: October 1973 to current year.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since October 1973.

REMARKS.--In addition to water-quality monitor, samples were collected by a local observer. Observer samples were used to interpret periods of monitor malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 4,800 micromhos Feb. 8, 1975; minimum, 377 micromhos Aug. 1, 1975.
WATER TEMPERATURES: Maximum, 34.0°C July 31, 1977; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,800 micromhos April 10; minimum daily, 580 micromhos Aug. 14.
WATER TEMPERATURES: Maximum daily, 34.0°C July 31; minimum daily, 0.0°C on several days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)
FEB												
02...	145	3000	--	.0	380	460	280	120	40	420	8.5	6.2
MAR												
30...	3.0	4050	8.3	14.5	7	740	550	180	70	540	8.7	7.7
MAY												
11...	250	1550	8.5	22.0	1000	300	180	74	28	250	6.3	9.1
31...	227	1400	8.0	25.0	8000	540	350	160	34	180	3.4	11
JUN												
24...	1.5	3100	8.2	34.0	20	700	560	180	60	410	6.8	8.0
SEP												
13...	33	2500	8.4	20.5	4200	350	210	86	32	480	9.4	6.9

DATE	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
FEB												
02...	224	--	200	690	.9	18	1590	2.16	622	.96	1.1	.46
MAR												
30...	227	0	540	820	.9	19	2340	3.18	19.0	.01	.35	.02
MAY												
11...	150	0	180	380	.7	13	1020	1.39	688	.30	.79	.21
31...	230	0	200	250	1.2	15	868	1.18	532	.94	22	5.0
JUN												
24...	170	0	480	640	.8	23	1970	2.68	8.14	.01	.77	.07
SEP												
13...	170	0	180	660	.9	16	1460	1.99	130	--	--	--

07157740 CIMARRON RIVER NEAR BUTTERMILK, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT			
12...	1740	24.0	630
19...	0840	1.5	590
20...	1410	15.0	560
25...	1715	15.0	840
NOV			
10...	1600	13.5	820
DEC			
04...	1715	4.0	640
11...	1252	.5	880
21...	1344	1.0	890
29...	1730	5.0	800
JAN			
27...	1025	2.0	520
FEB			
02...	1300	.0	690
04...	1015	6.0	630
18...	1625	13.5	820
MAR			
04...	1030	3.5	910
07...	1545	17.0	900
16...	1035	10.5	970
27...	1505	17.0	860
30...	1450	14.5	820
APR			
04...	1735	10.5	810

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
APR			
13...	1400	22.0	660
19...	1535	23.0	1130
24...	1020	19.0	390
30...	1050	23.0	770
MAY			
02...	1035	22.0	310
09...	1637	23.5	540
11...	1620	22.0	300
18...	0830	19.0	230
22...	2020	18.5	350
28...	1330	22.5	120
31...	1650	25.0	250
JUN			
04...	0430	20.0	640
08...	1600	30.0	770
09...	0845	21.0	780
16...	1800	31.0	860
24...	1700	34.0	640
25...	1920	29.0	540
JUL			
04...	1300	20.0	750
27...	1030	21.5	160
AUG			
01...	1525	31.5	240

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
AUG			
05...	0815	22.0	400
07...	1630	33.5	780
13...	1955	28.5	58
14...	1955	20.5	64
23...	0950	23.0	580
SEP			
01...	0950	24.5	640
02...	1910	28.0	340

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
SEP			
10...	1755	25.5	710
11...	1610	20.0	800
13...	1145	20.5	660
17...	0053	21.0	180
20...	1320	25.5	500
29...	1525	22.0	740
30...	1235	25.5	790

07157740 CIMARRON RIVER NEAR BUTTERMILK, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3160	2720	3010	3160	2500	2590	3510	1890	1540	3260	1430	2040
2	3100	3000	2940	3220	2480	2500	3580	1530	1980	3380	1500	1570
3	3140	3040	2700	3290	2290	3030	3470	1700	1790	3480	1290	1430
4	3100	2990	2440	3360	2290	3630	3510	1870	2760	3570	1830	1640
5	2940	2970	2570	3420	2500	3740	3470	1900	2880	3550	2020	2220
6	2960	2930	2670	3490	2740	3630	3340	2040	3010	3520	2230	2740
7	2920	2840	2800	3430	2670	3640	3330	2170	3060	3500	3320	2290
8	2830	2770	3070	3350	2870	3610	3400	2310	3150	3400	3310	2600
9	2850	2690	2880	3100	2850	3590	3730	2400	3180	3400	3300	2920
10	2830	2610	2680	2900	2860	3550	3800	2380	3370	3500	3290	3000
11	2760	2670	3220	2700	2920	3550	3420	2360	3480	3460	1400	3240
12	2870	3090	3100	2750	2970	3610	3030	2340	3580	3420	1400	3230
13	2610	3050	2990	2850	2940	3560	2950	2490	3440	3380	600	2840
14	2390	3020	2660	2900	3070	3520	2900	2640	3440	3340	540	1540
15	2330	2990	2750	2860	3000	3220	2860	2320	3520	3300	880	2550
16	2180	3010	2850	2820	2930	3480	2800	2010	3610	3270	960	1570
17	1930	3060	2870	2780	3000	3340	2810	1700	3580	3250	1050	1010
18	2060	3060	2900	2740	2920	3200	2790	1380	3530	3230	1130	1870
19	2720	3040	2930	2700	2970	3420	3790	1440	3340	3210	1090	1870
20	2690	3010	3160	2660	3030	3520	2580	1750	3290	3190	1250	2160
21	2640	2980	3250	2640	2990	1380	2610	2090	3240	3160	1260	2760
22	2660	2920	3200	2580	2830	3270	2880	1810	3200	3120	1250	2840
23	2660	2920	3150	2520	2900	3200	2100	1670	3150	3080	2460	2980
24	2660	2940	3100	2260	2830	3150	1800	1310	3100	3040	2320	3130
25	2890	2930	3040	2180	2660	3120	1820	1450	3060	3000	2190	3310
26	2920	2930	3000	2040	2560	3120	2890	1240	3020	2950	2280	3130
27	2900	3200	2930	2020	2550	3220	2300	1140	2900	1160	2480	3110
28	2860	3130	2870	2290	2550	3190	2660	1050	3140	1460	2520	3070
29	2740	3080	2920	2400	---	3100	2600	1160	3180	1800	2560	3220
30	2640	3060	3060	2470	---	3410	2250	1270	3220	2120	2570	---
31	2550	---	3100	2690	---	3530	---	1360	---	1440	2390	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.5	11.5	2.5	1.0	1.0	5.0	12.5	21.5	23.0	28.0	31.5	24.5
2	26.0	12.5	2.5	1.0	1.0	7.0	13.0	22.0	30.5	28.0	28.5	28.0
3	20.0	11.0	2.5	1.0	2.0	6.0	11.0	20.5	30.5	29.0	24.5	25.5
4	14.5	9.0	3.0	1.0	3.0	6.0	8.5	19.5	28.0	28.0	21.5	24.5
5	19.0	9.0	4.5	1.0	2.5	6.0	10.0	23.5	27.0	29.0	22.0	27.0
6	14.5	11.0	2.0	0.5	3.0	8.0	15.0	22.5	26.5	30.0	26.5	29.5
7	12.0	9.5	2.5	0.5	1.5	10.0	17.5	21.0	21.5	31.0	33.5	28.5
8	12.5	9.5	2.0	0.5	3.0	12.0	18.0	20.0	26.0	31.5	32.5	26.5
9	15.5	11.0	4.0	0.0	4.5	13.5	17.5	23.5	21.0	31.5	32.0	25.0
10	17.5	9.5	2.0	0.0	7.0	13.0	17.5	23.0	26.5	32.0	31.0	25.5
11	17.5	6.0	1.0	0.0	8.0	9.0	16.5	23.5	27.0	26.0	28.0	28.0
12	18.0	3.5	1.0	0.0	8.0	6.5	17.5	24.0	26.0	28.0	26.0	29.0
13	18.0	3.0	3.0	0.0	8.5	10.0	18.0	24.5	24.0	30.0	28.5	25.5
14	17.5	3.5	4.0	0.0	7.5	13.5	18.0	25.0	29.0	32.0	28.5	25.0
15	14.5	3.0	3.0	0.0	5.5	12.5	18.0	21.0	30.0	34.0	32.0	24.5
16	12.0	4.0	3.0	0.0	6.5	10.0	19.5	18.5	31.0	33.5	28.5	21.5
17	9.0	5.5	4.0	0.0	8.0	12.0	19.5	18.0	28.0	31.5	25.0	22.0
18	8.0	7.5	4.0	0.0	8.5	12.0	20.0	19.0	24.5	32.5	21.5	22.0
19	7.5	8.5	5.0	0.0	7.5	9.0	20.0	20.0	27.5	31.0	24.0	24.0
20	8.0	7.0	2.0	0.0	7.5	9.0	17.5	20.0	27.5	30.0	27.0	25.5
21	10.0	6.0	1.0	0.5	9.0	8.5	13.0	20.5	28.0	28.5	29.5	22.0
22	11.5	4.0	1.0	0.5	9.5	10.0	15.0	18.5	28.0	27.0	24.5	18.5
23	15.5	6.0	1.0	1.0	7.0	12.0	16.0	23.5	28.5	26.0	23.0	22.5
24	10.5	6.0	2.0	1.0	7.5	13.5	17.5	25.5	29.0	23.5	24.5	26.5
25	8.5	6.5	2.0	1.5	7.5	16.5	18.0	22.5	29.0	23.5	26.5	26.5
26	6.0	4.5	2.0	1.0	6.5	16.0	21.0	19.0	29.0	24.0	27.5	25.0
27	5.5	1.0	3.5	1.5	6.0	15.0	21.5	18.0	23.0	26.0	25.0	24.0
28	7.0	1.0	4.0	1.0	6.0	15.5	22.0	22.0	25.5	28.0	25.5	20.0
29	7.0	1.5	2.5	1.0	---	11.0	17.5	24.0	26.0	30.0	26.0	22.0
30	10.0	2.0	1.0	1.0	---	9.5	21.0	26.5	27.5	32.0	28.0	25.5
31	11.0	---	1.0	1.0	---	10.0	---	21.0	---	34.0	29.5	---

07157740 CIMARRON RIVER NEAR BUTTERMILK, KS--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
APR					
22...	1240	137	--	5320	1970
MAY					
11...	1620	250	1550	2330	1570

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
APR									
22...	1240	137	5320	64	83	96	99	100	--
MAY									
11...	1620	250	2330	57	67	79	82	86	100

07157900 CAVALRY CREEK AT COLDWATER, KS

LOCATION.--Lat 37°16'00", long 99°20'40", in NE¼NE¼ sec.14, T.32 S., R.19 W., Comanche County, Hydrologic Unit 11040008, at downstream side of county highway bridge, 1.0 mi (1.6 km) west of Coldwater, and at mile 18.3 (29.4 km).

DRAINAGE AREA.--39 mi² (101 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1957-66. October 1966 to current year.

REVISED RECORDS.--WRD KS-76-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 2,016.474 ft (614.621 m) above mean sea level. Prior to October 1, 1966, crest-stage gage at present site and at datum 6.00 ft (1.829 m) lower. October 1, 1966, to September 30, 1969, water-stage recorder at present site and at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair except those for November to January, which are poor.

AVERAGE DISCHARGE.--11 years, 3.71 ft³/s (0.105 m³/s), 2,690 acre-ft/yr (3.32 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 10.68 ft (3.255 m), present datum, June 16, 1958 (discharge not determined). October 1966 to current year: Maximum discharge, 3,550 ft³/s (101 m³/s) Sept. 26, 1973, gage height, 9.40 ft (2.865 m), from rating curve extended above 840 ft³/s (23.8 m³/s); minimum, 0.03 ft³/s (0.001 m³/s) Aug. 2, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 90 ft³/s (2.55 m³/s) May 24, gage height, 2.75 ft (0.838 m); no peak above base of 310 ft³/s (8.78 m³/s); minimum discharge, 0.86 ft³/s (0.024 m³/s) June 3, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.5	1.4	1.9	2.0	1.5	1.7	.94	1.0	2.0	1.7	1.1
2	1.6	1.4	1.3	2.0	1.9	1.7	1.5	.94	1.0	1.9	2.2	1.1
3	1.5	1.3	1.3	2.1	1.8	1.5	1.4	.95	.93	1.7	2.2	1.1
4	1.5	1.3	1.3	2.1	1.7	1.3	1.4	1.0	.93	1.6	1.5	1.1
5	1.5	1.4	1.3	2.2	1.7	1.3	1.3	.98	.91	1.5	1.3	1.1
6	1.5	1.5	1.0	2.0	1.7	1.3	1.2	1.0	.93	1.6	1.3	1.0
7	1.5	1.5	1.1	1.9	1.6	1.3	1.2	1.1	.94	1.6	1.2	1.0
8	1.5	1.5	1.3	2.1	1.6	1.3	1.2	1.1	1.0	1.5	1.1	.98
9	1.5	1.6	.98	2.1	1.6	1.3	1.2	1.1	1.0	1.5	1.0	.97
10	1.5	1.5	1.4	2.1	1.6	1.3	1.2	1.2	1.0	1.4	1.0	.94
11	1.5	1.5	1.5	2.1	1.6	1.3	1.1	1.2	1.1	1.4	1.0	1.1
12	1.5	1.5	1.5	2.0	1.6	1.3	1.1	1.4	1.5	1.3	1.0	1.1
13	1.5	1.5	1.5	2.1	1.5	1.3	1.0	1.5	1.3	1.3	1.1	1.3
14	1.5	1.5	1.5	2.1	1.5	1.2	1.0	1.5	1.4	1.3	1.1	1.2
15	1.6	1.4	1.3	2.2	1.5	1.2	1.1	1.5	1.4	1.2	1.0	1.2
16	1.6	1.4	1.1	2.2	1.4	1.2	1.0	1.6	1.5	1.2	.93	9.7
17	1.6	1.3	1.3	2.2	1.4	1.2	1.1	1.6	1.6	1.2	1.2	2.9
18	1.6	1.1	1.5	2.2	1.4	1.8	1.1	1.6	1.8	1.2	.98	1.6
19	1.6	1.1	1.9	1.8	1.4	1.8	.98	1.6	1.9	1.2	1.2	1.5
20	1.6	1.1	2.0	1.9	1.4	1.8	1.1	1.8	1.9	1.2	1.1	1.4
21	1.6	1.1	2.0	2.1	1.4	1.9	1.0	2.1	1.9	1.2	1.1	1.4
22	1.6	1.2	2.0	1.9	1.4	1.9	.97	1.9	2.2	1.3	1.0	1.3
23	1.6	1.3	1.7	1.9	1.6	1.9	.94	3.1	8.4	1.4	1.3	1.3
24	1.6	1.4	1.9	1.9	1.6	1.9	.94	41	8.5	1.4	1.1	1.3
25	1.6	1.3	1.7	1.9	1.6	1.9	.90	2.0	7.1	1.3	1.1	1.3
26	1.6	1.3	1.5	1.9	1.6	1.9	.90	1.2	3.6	1.4	1.0	1.2
27	1.6	1.3	1.7	2.0	1.5	1.9	.90	1.1	2.9	1.7	.98	1.2
28	1.6	1.3	1.7	2.5	1.5	1.9	.86	1.1	2.5	1.7	2.4	1.2
29	1.5	1.3	1.6	2.3	---	1.9	.94	1.0	2.3	1.8	1.4	1.2
30	1.5	1.4	1.7	2.3	---	1.8	.98	1.0	2.2	1.7	1.3	1.2
31	1.5	---	1.8	2.2	---	1.8	---	1.0	---	1.6	1.2	---
TOTAL	48.0	40.8	46.78	64.2	44.1	48.6	33.21	82.11	66.64	45.3	38.99	45.99
MEAN	1.55	1.36	1.51	2.07	1.58	1.57	1.11	2.65	2.22	1.46	1.26	1.53
MAX	1.6	1.6	2.0	2.5	2.0	1.9	1.7	41	8.5	2.0	2.4	9.7
MIN	1.5	1.1	.98	1.8	1.4	1.2	.86	.94	.91	1.2	.93	.94
AC-FT	95	81	93	127	87	96	66	163	132	90	77	91

CAL YR 1976 TOTAL 969.76 MEAN 2.65 MAX 130 MIN .90 AC-FT 1920
WTR YR 1977 TOTAL 604.72 MEAN 1.66 MAX 41 MIN .86 AC-FT 1200

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT					
06...	1525	1.4	550	5	.02
NOV					
02...	1000	1.4	900	1	.00
DEC					
08...	1010	1.2	570	1	.00
JAN					
06...	0950	2.0	1000	8	.04
JUN					
23...	1635	1.0	450	3400	9.2

07157940 BLUFF CREEK NEAR BUTTERMILK, KS

LOCATION.--Lat 37°01'55", long 99°20'45", NW¼ sec.3, T.35 S., R.20 W., Comanche County, Hydrologic Unit 11040008, near left bank of county highway bridge, 2.2 mi (3.5 km) north of Kansas-Oklahoma State line, 11.3 mi (18.2 km) southwest of Buttermilk, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--657 mi^2 (1,702 km^2), of which 76 mi^2 (197 km^2) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,700.33 ft (518.261 m) above mean sea level.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft^3/s (453 m^3/s) Sept. 26, 1973, gage height, 14.35 ft (4.374 m); minimum, no flow Aug. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 349 ft^3/s (9.88 m^3/s) June 25, gage height, 5.83 ft (1.777 m), no peak above base of 1,000 ft^3/s (28.3 m^3/s); no flow Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	7.3	18	12	24	12	15	15	41	24	.28	1.3
2	4.2	7.1	18	8.5	21	13	15	11	35	20	.11	1.5
3	3.9	7.0	20	11	22	15	15	44	32	16	.59	1.3
4	3.7	7.2	20	16	20	13	14	55	26	13	.26	1.1
5	3.7	7.7	20	25	17	12	14	45	22	11	.04	.85
6	3.8	8.7	20	18	16	12	14	30	19	8.5	.00	.65
7	3.8	8.5	18	25	14	13	14	15	16	7.1	.01	.50
8	3.8	9.3	19	20	14	13	13	7.0	14	6.3	.04	.40
9	3.9	10	20	19	16	13	13	20	12	6.9	.16	.30
10	3.7	11	20	18	15	13	13	55	9.7	32	.15	.25
11	3.6	11	14	16	14	13	13	30	8.0	13	.84	.75
12	3.5	11	17	14	13	13	14	16	51	6.9	.46	2.0
13	3.5	12	20	12	12	12	14	12	121	4.7	22	1.5
14	3.5	12	21	11	13	12	14	7.4	45	3.5	7.5	3.2
15	3.5	13	19	10	13	12	14	6.4	31	2.5	1.4	3.0
16	3.5	14	19	9.5	15	11	14	4.3	23	2.1	1.3	18
17	3.5	14	19	9.0	15	12	13	50	18	1.7	2.3	29
18	3.6	15	19	10	14	12	12	34	15	1.4	1.8	15
19	3.4	14	19	11	14	11	12	12	13	.99	2.1	7.2
20	3.6	15	16	14	14	11	14	11	11	.80	5.3	4.7
21	3.9	14	22	18	14	11	18	41	9.4	.63	3.7	2.8
22	4.0	14	17	22	15	11	37	46	8.0	.63	2.8	2.0
23	4.3	15	24	22	15	13	46	95	18	.56	3.0	2.0
24	4.2	15	21	28	13	14	79	221	190	.42	2.0	1.7
25	4.6	17	20	37	12	15	41	89	276	.32	1.5	1.4
26	5.3	17	18	42	12	14	44	64	212	.79	.90	1.4
27	6.0	15	20	43	12	14	82	60	88	.87	.60	1.3
28	6.4	14	19	27	12	18	54	55	67	.49	.75	1.3
29	6.5	13	18	36	---	19	30	48	35	.44	.85	1.2
30	7.8	15	19	37	---	17	20	45	29	1.4	.95	1.2
31	7.8	---	16	50	---	16	---	41	---	1.0	1.1	---
TOTAL	134.9	363.8	590	651.0	420	410	725	1285.1	1467.1	189.94	64.79	108.80
MEAN	4.35	12.1	19.0	21.0	15.0	13.2	24.2	41.5	48.9	6.13	2.09	3.63
MAX	7.8	17	24	50	24	19	82	221	276	32	22	29
MIN	3.4	7.0	14	8.5	12	11	12	4.3	8.0	.32	.00	.25
AC-FT	268	722	1170	1290	833	813	1440	2550	2910	377	129	216

CAL YR 1976 TOTAL 13694.00 MEAN 37.4 MAX 1050 MIN .80 AC-FT 27160
WTR YR 1977 TOTAL 6410.43 MEAN 17.6 MAX 276 MIN .00 AC-FT 12720

07157940 BLUFF CREEK NEAR BUTTERMILK, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1973 to current year.
WATER TEMPERATURES: August 1973 to current year.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since August 1973.

REMARKS.--In addition to water-quality monitor, samples were collected by a local observer. Observer samples were used to interpret periods of monitor malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,600 micromhos Aug. 14, 1977; minimum 273 micromhos Oct. 11, 1973.
WATER TEMPERATURES: Maximum, 34.0°C July 20, 1974; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,600 micromhos Aug. 14; minimum daily, 290 micromhos June 24.
WATER TEMPERATURES: Maximum daily, 32.0°C July 29; minimum daily, 0.0°C on several days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
FEB												
02...	25	780	--	3.0	9	340	130	100	23	38	.9	3.4
MAR												
31...	1.6	860	8.1	14.0	8	380	150	110	25	42	.9	4.0
MAY												
11...	32	850	8.3	22.0	30	380	170	110	25	37	.8	4.6
31...	40	840	8.1	26.5	30	370	140	110	22	38	.9	5.4
JUN												
24...	181	245	7.9	23.0	370	130	19	38	7.5	15	.6	9.1
SEP												
13...	1.5	1580	8.0	21.0	1	780	590	230	50	150	2.3	5.0

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
FEB												
02...	267	--	160	31	.6	20	524	.71	35.7	.73	.37	.09
MAR												
31...	273	0	190	44	.6	18	589	.80	2.56	.22	.32	.09
MAY												
11...	250	0	220	26	.6	18	594	.81	51.3	.44	4.2	1.1
31...	280	0	180	29	.6	22	553	.75	60.5	.36	ND	.18
JUN												
24...	130	0	33	14	.3	13	202	.27	98.7	.30	2.0	.61
SEP												
13...	230	0	560	230	.6	19	1390	1.89	5.63	--	--	--

07157940 BLUFF CREEK NEAR BUTTERMILK, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT			
02...	1630	25.0	120
19...	0830	6.0	230
24...	1925	11.0	170
NOV			
07...	1740	11.0	70
08...	1805	12.0	72
24...	1710	10.0	49
30...	1030	3.5	94
DEC			
13...	1455	6.0	44
31...	1735	2.0	82
JAN			
07...	1010	2.0	43
26...	1725	2.0	29
FEB			
01...	1010	4.0	34
02...	1600	3.0	31
11...	0835	7.0	40
17...	1420	12.5	34
28...	1600	11.5	44
MAR			
07...	1540	15.0	44
14...	1210	15.0	44
21...	1230	11.5	56
31...	1500	14.0	44

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
APR			
05...	1810	15.0	44
11...	1750	18.0	44
19...	1530	22.0	30
28...	1730	26.5	48
MAY			
02...	1830	25.0	31
11...	1300	22.0	26
16...	0730	17.5	44
25...	1955	23.0	22
28...	1338	22.5	21
31...	1830	26.5	29
JUN			
04...	2135	27.5	38
10...	1430	30.5	66
13...	0810	24.5	14
19...	1130	26.0	58
24...	1740	23.0	14
27...	0722	25.0	13
JUL			
10...	2045	28.5	12
14...	1535	32.5	120
19...	2000	28.0	260

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
JUL			
24...	2150	25.0	380
29...	1825	34.0	300
31...	2115	34.0	350
AUG			
03...	0930	22.0	190
09...	2015	26.5	380
13...	1950	30.5	160
20...	0900	19.5	160
29...	1755	27.5	49

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
SEP			
02...	1905	28.5	200
07...	1730	30.0	270
13...	1315	21.0	230
17...	0945	21.0	18
24...	1645	26.5	300
28...	1245	19.5	360

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
MAY					
11...	1300	32	850	184	16
AUG					
09...	1550	119	--	5650	1820

07157940 BLUFF CREEK NEAR BUTTERMILK, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1700	745	847	1180	749	910	856	617	696	589	2310	1540
2	1810	695	847	1060	761	904	880	772	714	581	2300	1830
3	1850	831	823	945	763	871	924	750	729	701	1700	1900
4	1890	877	851	824	810	846	903	745	744	773	2140	1970
5	1910	967	882	815	855	894	884	812	756	910	2410	1980
6	1860	1130	876	755	820	845	903	814	769	1020	2330	2060
7	1870	1110	989	753	863	874	865	816	778	1140	2360	2100
8	1860	1170	891	885	872	833	828	818	789	993	2360	2220
9	1860	1190	859	1140	844	866	790	862	804	807	2360	2340
10	1840	1150	841	1210	840	877	816	874	858	608	2350	2330
11	1770	1130	990	1390	872	901	842	885	641	759	2180	2350
12	1860	1120	890	1370	876	921	871	909	423	1010	2250	2320
13	1770	1170	807	1320	880	944	904	932	476	1300	2420	2220
14	2350	1100	851	1030	891	955	858	932	406	1360	2600	2230
15	2090	1070	875	948	879	944	854	938	516	1440	2560	2340
16	2000	1050	875	894	813	968	840	968	554	1530	2440	1460
17	1780	1030	860	979	803	966	854	963	567	1710	2320	833
18	1720	1010	872	919	834	974	873	958	579	1880	2040	627
19	1900	1030	860	1080	851	1100	792	1040	590	2060	2090	1070
20	2000	994	844	847	847	997	877	888	602	2010	1970	1510
21	1770	991	953	761	852	991	864	736	614	1990	2150	2180
22	1830	1000	830	699	855	944	858	831	626	1920	2210	2370
23	1670	987	880	713	884	896	869	833	639	1900	2440	2320
24	1780	971	817	657	912	887	889	351	298	2400	2300	2400
25	1600	958	854	698	900	878	902	598	318	2400	2160	2390
26	1640	941	885	667	912	884	914	619	310	1690	2490	2450
27	1510	1120	828	691	917	869	914	616	349	2200	2500	2510
28	1360	1290	853	720	917	833	929	545	457	2040	1360	2450
29	1300	1310	877	890	---	825	828	590	699	2130	850	2290
30	1060	1080	871	---	---	834	461	647	517	2200	1090	2230
31	818	---	1210	738	---	860	---	672	---	2280	1440	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	8.0	1.5	0.0	0.5	5.5	13.5	21.0	25.0	24.5	28.5	20.5
2	20.5	9.0	2.0	0.5	1.5	9.5	15.5	23.0	26.5	24.5	26.0	26.0
3	18.0	10.5	3.0	0.0	2.0	7.0	9.0	21.5	26.0	25.0	28.0	23.5
4	15.5	8.5	2.5	0.5	4.0	6.5	10.5	18.0	27.0	23.0	30.0	21.5
5	17.5	8.5	2.5	0.5	4.5	5.0	13.5	22.0	26.5	24.0	27.5	21.5
6	16.0	10.0	2.0	1.0	2.0	6.5	10.5	21.0	23.5	25.0	26.0	27.5
7	12.5	9.5	0.5	0.5	4.0	7.5	13.5	19.5	22.5	27.5	25.0	26.5
8	13.0	9.0	1.0	0.0	4.5	11.5	16.5	18.5	23.5	27.5	22.0	25.0
9	15.0	10.0	3.0	0.0	6.5	12.0	19.5	22.0	25.0	28.0	21.5	24.0
10	17.0	9.5	2.5	0.0	7.0	12.5	17.0	22.5	25.5	28.5	21.0	23.0
11	17.5	6.5	0.5	0.0	4.0	9.5	15.5	23.0	24.5	27.0	21.5	25.5
12	17.5	4.0	1.0	0.0	6.0	6.5	16.5	22.0	26.5	27.5	23.5	26.0
13	15.0	3.5	1.5	0.5	9.5	11.0	17.0	21.5	25.0	22.5	25.0	23.0
14	11.5	3.5	2.5	0.0	8.0	12.0	19.0	21.5	25.5	30.0	27.0	21.0
15	11.0	3.0	2.5	0.0	5.0	14.0	17.0	22.0	25.5	28.5	26.0	20.0
16	9.0	3.5	2.0	0.0	7.5	9.0	19.0	23.0	25.0	27.5	27.0	22.5
17	9.5	5.0	3.0	0.5	10.0	14.0	19.5	23.5	25.5	26.5	24.0	22.0
18	9.0	7.0	3.5	0.0	10.5	13.0	19.5	22.5	25.5	25.5	22.5	22.0
19	11.0	8.0	3.5	0.5	8.0	9.5	19.0	20.5	26.5	24.5	22.0	20.5
20	12.5	6.5	1.0	0.0	9.5	9.5	15.0	17.0	26.5	26.5	24.5	21.0
21	10.0	6.0	0.5	0.5	10.5	8.5	12.0	17.5	26.0	26.0	26.0	22.0
22	11.5	3.5	0.5	0.0	10.0	12.0	14.0	21.5	25.0	26.5	27.0	22.5
23	15.0	5.5	0.5	0.5	10.0	15.0	20.0	22.5	24.0	27.5	27.0	21.5
24	11.0	5.0	1.5	0.0	9.5	14.5	20.0	24.5	23.5	26.0	25.0	19.5
25	9.0	5.5	2.0	0.0	9.0	14.0	18.5	23.5	24.5	24.0	25.5	20.0
26	7.0	4.5	1.5	0.0	8.5	13.5	22.0	20.0	25.5	22.5	25.5	20.0
27	6.0	2.0	3.0	0.0	8.5	13.0	16.5	22.0	27.5	26.0	22.5	21.0
28	7.0	1.5	3.5	0.5	9.5	17.0	22.0	25.0	27.0	30.0	20.0	20.5
29	7.5	2.0	2.0	0.0	---	11.0	16.5	23.0	25.0	32.0	25.5	21.0
30	8.5	3.0	0.5	0.0	---	11.5	19.0	25.5	25.5	31.0	26.0	23.0
31	8.5	---	0.0	0.0	---	10.5	---	24.5	---	30.0	28.0	---

07165900 TORONTO LAKE NEAR TORONTO, KS

LOCATION.--Lat 37°44'30", long 95°56'00", in NW¼SE¼ sec.36, T.26 S., R.13 E., Woodson County, Hydrologic Unit 11070101, in control tower of dam on Verdigris River, 4.0 mi (6.4 km) southeast of town of Toronto, and at mile 271.5 (436.8 km).

DRAINAGE AREA.--730 mi² (1,891 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--March 1960 to current year. Prior to October 1971 published as "Toronto Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Mar. 15, 1960. Maximum pool is 311,200 acre-ft (384 hm³) at elevation 940.6 ft (286.69 m) consisting of the following: Minimum pool, 13,000 acre-ft (16.0 hm³) at elevation 897.0 ft (273.41 m); conservation pool, 10,290 acre-ft (12.7 hm³) between elevations 897.0 ft (273.41 m) and 901.5 ft (274.78 m); flood-control pool, 172,000 acre-ft (212 hm³) between elevations 901.5 ft (274.78 m) and 931.0 ft (283.77 m); uncontrolled storage, 115,900 acre-ft (143 hm³) between elevations 931.0 ft (283.77 m) and 940.6 ft (286.69 m). Reservoir is used for flood control and conservation. Figures given herein represent total contents.

COOPERATION.--Elevations and contents furnished by Corps of Engineers; records reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 928.35 ft (282.961 m) Sept. 16, 1961, contents, 170,000 acre-ft (210 hm³); minimum since conservation pool first reached, 897.25 ft (273.482 m) Mar. 30, 1967, contents, 13,480 acre-ft (16.6 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 915.45 ft (279.029 m) June 26, contents, 79,060 acre-ft (97.5 hm³); minimum, 899.63 ft (274.207 m) Apr. 13, contents 17,080 acre-ft (21.1 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made by Corps of Engineers in 1966)

895	8,740	910	51,650
900	17,930	915	76,570
905	32,460	920	107,400

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	900.70	900.52	900.10	899.95	899.93	899.82	899.78	901.66	908.73	910.70	903.73	903.97
2	900.69	900.52	900.10	899.96	899.92	899.86	899.80	901.67	907.66	909.64	903.56	904.05
3	900.66	900.50	900.09	899.96	899.92	899.89	899.84	901.65	906.82	908.50	903.46	905.10
4	900.71	900.48	900.09	899.97	899.91	899.87	899.86	901.64	906.17	907.32	903.33	905.10
5	900.81	900.46	900.10	899.97	899.92	899.86	899.77	901.60	905.49	906.18	903.17	905.00
6	900.81	900.47	900.11	899.98	899.91	899.85	899.77	901.59	904.73	905.50	903.01	904.83
7	900.77	900.45	900.11	899.98	899.91	899.84	899.76	901.55	903.95	905.18	902.84	904.65
8	900.75	900.42	900.08	899.97	899.91	899.82	899.75	901.52	903.14	905.05	902.65	904.41
9	900.73	900.37	900.06	899.98	899.91	899.80	899.72	901.47	902.29	904.85	902.58	904.17
10	900.71	900.29	900.10	899.98	899.92	899.82	899.69	901.45	901.80	904.65	902.60	903.88
11	900.70	900.27	900.07	899.98	899.92	899.86	899.67	901.43	901.70	904.45	905.37	903.62
12	900.69	900.26	900.07	899.97	899.92	899.87	899.66	901.42	901.60	904.27	905.78	903.35
13	900.67	900.24	900.06	899.97	899.92	899.86	899.99	901.40	901.55	904.06	905.64	903.26
14	900.65	900.24	900.06	899.97	899.91	899.84	900.11	901.37	901.54	903.84	905.46	903.33
15	900.63	900.23	900.06	899.96	899.90	899.85	900.20	901.34	901.52	903.62	905.53	903.27
16	900.61	900.22	900.05	899.96	899.88	899.84	900.35	901.36	901.51	903.39	905.40	903.22
17	900.57	900.22	900.04	899.95	899.89	899.87	900.49	902.63	901.48	903.15	905.23	903.32
18	900.58	900.21	900.03	899.95	899.88	899.84	900.71	903.21	901.69	902.91	905.00	903.19
19	900.57	900.21	900.03	899.95	899.86	899.85	900.95	903.27	902.14	902.73	904.76	902.97
20	900.55	900.20	900.02	899.95	899.85	899.80	901.09	904.11	905.48	902.60	904.50	902.71
21	900.54	900.18	900.00	899.93	899.82	899.80	901.28	909.13	907.79	902.55	904.26	902.62
22	900.51	900.16	900.00	899.94	899.80	899.77	901.41	911.40	911.83	902.87	903.98	902.62
23	900.54	900.16	900.00	899.96	899.85	899.77	901.49	912.07	914.00	903.68	903.88	902.67
24	900.53	900.15	900.00	899.96	899.84	899.74	901.54	912.13	915.04	903.86	903.73	902.79
25	900.50	900.15	900.00	899.96	899.83	899.73	901.56	911.45	915.37	903.92	903.51	902.62
26	900.50	900.20	900.00	899.96	899.85	899.72	901.57	910.52	915.21	903.97	903.23	902.81
27	900.50	900.17	900.00	899.95	899.84	899.76	901.56	909.50	914.42	903.98	902.92	902.78
28	900.48	900.13	900.00	899.95	899.85	899.83	901.59	910.10	913.68	903.99	903.06	902.90
29	900.52	900.12	899.98	899.94	---	899.83	901.59	910.91	912.77	903.95	903.43	904.17
30	900.55	900.11	899.97	899.93	---	899.82	901.63	910.42	911.80	903.90	903.45	904.39
31	900.53	---	899.96	899.93	---	899.80	---	909.64	---	903.85	903.39	---
MEAN	900.62	900.28	900.04	899.96	899.88	899.82	900.54	904.99	906.76	904.62	903.95	903.62
MAX	900.81	900.52	900.11	899.98	899.93	899.89	901.63	912.13	915.37	910.70	905.78	905.10
MIN	900.48	900.11	899.96	899.93	899.80	899.72	899.66	901.34	901.48	902.55	902.58	902.62
(+)	19,330	18,220	17,840	17,770	17,590	17,470	22,230	50,140	59,990	28,690	27,330	30,440
(‡)	-470	-1,110	-380	-70	-180	-120	+4,760	+27,910	+9,850	-31,300	-1,360	+3,110

CAL YR 1976 .... (‡) -2,310
WTR YR 1977 .... (‡) +10,640

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

07166000 VERDIGRIS RIVER NEAR COYVILLE, KS

LOCATION.--Lat 37°42'20", long 95°54'20", in SW¼SW¼ sec.8, T.27 S., R.14 E., Wilson County, Hydrologic Unit 11070101, on county highway bridge, 1.2 mi (1.9 km) upstream from Meadow Creek, 1.5 mi (2.4 km) northwest of Coyville, 2.5 mi (4.0 km) downstream from Pig Creek, and at mile 268.0 (431.2 km).

DRAINAGE AREA.--747 mi² (1,935 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1211: 1945(M), 1948(M). WSP 1241: 1941-42, 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 845.28 ft (257.64 m) above mean sea level (levels by Corps of Engineers). Prior to Jan. 25, 1952, nonrecording gage and Jan. 26, 1952, to July 17, 1961, water-stage recorder, both 100 ft (30 m) upstream at same datum. July 18, 1961, to Jan. 28, 1962, nonrecording gage at present site and datum. Since Jan. 26, 1961, auxiliary nonrecording gage 3.2 mi (5.1 km) downstream.

REMARKS.--Records good. Flow regulated since Mar. 15, 1960 by Toronto Lake, 3.5 mi (5.6 km) upstream (see sta 07165900).

COOPERATION.--Gage-height record, and 22 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--38 years, 502 ft³/s (14.22 m³/s), 363,700 acre-ft/yr (448 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft³/s (3,680 m³/s) July 12, 1951, gage height, 41.25 ft (12.573 m), from graph based on gage readings, from rating curve extended above 46,000 ft³/s (1,300 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1939-41, 1953-58.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,150 ft³/s (174 m³/s) June 22, gage height, 25.00 ft (7.620 m); no flow for parts of Dec. 31, Jan. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	9.4	5.6	.18	3.5	5.2	8.1	5.0	2730	2720	161	559
2	4.9	9.0	5.6	1.8	17	6.1	8.1	28	2670	2670	264	566
3	5.8	8.0	5.5	1.9	9.6	8.1	9.8	68	2100	2620	270	571
4	9.1	7.5	5.9	2.6	5.7	5.8	11	67	1430	2580	269	573
5	13	7.0	6.2	3.1	5.2	5.8	10	67	1410	2390	268	576
6	8.6	7.0	5.9	3.3	4.9	5.5	10	67	1390	1510	267	571
7	8.0	7.0	3.5	2.9	4.9	5.2	9.8	66	1360	778	266	567
8	8.0	7.0	4.1	3.8	4.9	5.2	10	65	1340	411	265	566
9	8.0	46	4.9	2.7	4.4	5.5	9.0	54	1320	407	152	565
10	7.5	105	5.2	3.4	3.5	5.5	8.7	10	804	405	17	561
11	7.5	5.8	4.7	3.7	2.4	10	9.0	9.0	140	405	158	561
12	7.5	4.7	5.2	3.7	2.0	5.5	9.4	9.0	138	403	311	559
13	7.5	5.4	5.1	4.7	1.5	4.9	22	9.0	81	399	589	561
14	7.0	5.8	5.2	4.9	1.1	5.2	38	9.0	12	396	589	560
15	7.0	5.7	5.4	4.8	1.1	4.7	14	9.0	11	393	589	560
16	7.0	6.9	5.3	4.3	1.1	4.4	24	9.4	10	390	586	560
17	7.0	7.1	5.4	4.8	.54	4.1	20	26	10	387	585	562
18	7.0	5.6	5.8	4.7	.81	4.1	11	84	22	385	579	560
19	7.0	5.5	5.4	5.1	1.5	4.1	12	357	112	292	577	558
20	7.0	5.5	4.2	5.5	2.7	4.4	8.7	370	2770	183	574	556
21	7.0	5.8	3.8	5.7	3.0	4.9	9.1	867	731	109	571	331
22	7.0	5.0	3.6	5.5	3.8	5.8	7.7	399	4110	18	569	101
23	7.0	4.6	3.3	6.0	3.9	7.1	7.5	388	919	18	568	100
24	7.0	4.1	3.2	5.3	5.5	6.8	7.5	1020	114	18	565	102
25	7.0	3.5	3.3	5.0	5.8	6.1	7.1	2360	49	18	564	100
26	7.0	3.3	3.2	5.5	6.3	5.8	6.8	2830	1200	19	562	100
27	7.0	4.3	3.5	6.2	6.1	6.5	6.5	2790	2510	18	560	101
28	7.0	4.4	4.0	5.6	5.5	8.4	5.5	2860	2870	18	563	102
29	9.7	5.6	4.2	5.4	---	6.1	5.5	3190	2830	35	561	429
30	10	5.3	3.5	4.8	---	6.5	5.0	2860	2770	96	563	127
31	11	---	.64	3.5	---	7.7	---	2780	---	97	461	---
TOTAL	235.8	358.2	140.34	130.38	118.45	181.0	329.8	23772.4	37967	20588	13447	12865
MEAN	7.61	11.9	4.53	4.21	4.23	5.84	11.0	767	1266	664	434	429
MAX	13	106	6.2	6.2	17	10	38	3190	4110	2720	589	576
MIN	4.7	3.3	.64	.18	.54	4.1	5.0	5.0	10	18	17	100
AC-FT	468	710	278	259	235	359	654	47150	75310	40840	26670	25520

CAL YR 1976 TOTAL 24852.04 MEAN 67.9 MAX 1720 MIN .64 AC-FT 49290
WTR YR 1977 TOTAL 110133.37 MEAN 302 MAX 4110 MIN .18 AC-FT 218400

07166500 VERDIGRIS RIVER NEAR ALTOONA, KS

LOCATION.--Lat 37°29'26", long 95°40'49", in SE¼NE¼SW¼ sec.29, T.29 S., R.16 E., Wilson County, Hydrologic Unit 11070101, on downstream side of highway bridge, 2.5 mi (4.0 km) southwest of Altoona, 2.5 mi (4.0 km) downstream from Big Cedar Creek, and at mile 227.9 (366.7 km).

DRAINAGE AREA.--1,138 mi² (2,947 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 780.18 ft (237.799 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 9, 1944, nonrecording gage at same site and datum.

REMARKS.--Records good. Considerable regulation since 1960 by Toronto Lake 43.6 mi (70.2 km) upstream (see sta 07165900). Diversion above station from Altoona Reservoir for municipal supply of Altoona.

COOPERATION.--Gage height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--39 years, 720 ft³/s (20.39 m³/s), 521,600 acre-ft/yr (643 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,000 ft³/s (2,010 m³/s) July 12, 1951, gage height, 31.09 (9.476 m); no flow at times in 1939-41, 1952-57.

EXTREMES FOR CURRENT YEAR.--Peak discharge above regulated base of 9,000 ft³/s (255 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 20	1945	11,100	314	22.85	6.965
June 22	0800	*19,400	549	25.82	7.870

Minimum discharge, 6.2 ft³/s (0.176 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	18	19	26	9.9	12	20	18	2980	2950	83	914
2	10	19	31	31	9.1	12	18	19	2870	2880	103	945
3	9.0	17	69	30	9.2	13	18	19	2790	2830	240	736
4	7.7	15	46	30	10	13	18	35	2020	2780	269	671
5	131	13	45	30	14	14	17	84	1600	2730	267	676
6	113	12	47	31	16	16	15	82	1570	2370	270	674
7	65	11	45	29	14	15	14	79	1540	1350	272	627
8	31	10	43	28	13	13	14	104	1520	751	270	634
9	21	10	41	27	13	10	13	207	1500	509	263	633
10	16	12	43	24	12	10	13	83	1470	464	214	621
11	13	113	43	23	13	47	12	57	781	439	1650	614
12	12	83	41	23	23	70	11	28	241	448	2300	609
13	11	37	41	23	24	49	12	17	196	429	661	600
14	11	23	40	25	21	40	16	11	179	401	724	585
15	10	17	41	25	17	34	133	9.1	79	381	733	594
16	10	13	40	23	14	28	88	8.1	31	372	717	632
17	10	11	38	20	12	24	61	18	16	362	707	684
18	11	12	38	19	11	22	97	33	458	351	686	620
19	12	22	39	19	9.5	19	88	75	3070	337	653	564
20	10	36	38	19	8.5	17	82	416	7530	263	642	532
21	9.7	42	36	19	8.0	14	75	2100	9670	149	630	528
22	12	42	34	20	7.9	13	63	2270	15900	146	621	348
23	11	42	34	21	8.3	12	60	765	14300	45	780	208
24	11	42	35	19	7.9	10	51	625	11900	15	693	334
25	11	36	35	17	7.2	10	42	1520	3040	12	641	589
26	11	36	35	14	11	12	37	2610	744	11	618	257
27	11	36	33	13	12	13	29	2850	2320	11	603	179
28	11	29	33	13	13	18	24	3020	2990	13	1120	197
29	12	23	32	13	---	30	20	3300	3420	13	1770	4870
30	17	20	31	11	---	28	18	3620	3120	10	903	1630
31	18	---	29	10	---	23	---	3250	---	24	787	---
TOTAL	662.4	852	1195	675	348.5	661	1179	27412.2	99845	23846	20890	22305
MEAN	21.4	28.4	38.5	21.8	12.4	21.3	39.3	884	3328	769	674	744
MAX	131	113	69	31	24	70	133	3620	15900	2950	2300	4870
MIN	7.7	10	19	10	7.2	10	11	8.1	16	10	83	179
AC-FT	1310	1690	2370	1340	691	1310	2340	54370	198000	47300	41440	44240

CAL YR 1976 TOTAL 79984.2 MEAN 219 MAX 14200 MIN 4.6 AC-FT 158600
WTR YR 1977 TOTAL 199871.1 MEAN 548 MAX 15900 MIN 7.2 AC-FT 396400

07167500 OTTER CREEK AT CLIMAX, KS

LOCATION.--Lat 37°42'30", long 96°13'30", in SW¼SE¼ sec.8, T.27 S., R.11 E., Greenwood County, Hydrologic Unit 11070102, near right bank on downstream side of pier of bridge on State Highway 99, 0.5 mi (0.8 km) south of Climax, 5.2 mi (8.4 km) upstream from mouth, and 5.5 mi (8.8 km) downstream from South Branch.

DRAINAGE AREA.--129 mi² (334 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 977.76 ft (298.021 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records poor.

COOPERATION.--Gage-height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--31 years, 78.4 ft³/s (2.220 m³/s), 56,800 acre-ft/yr (70.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 107,000 ft³/s (3,030 m³/s) July 3, 1976, gage height, 31.47 ft (9.592 m); no flow at times in 1953-57, 1963-68, 1971-73, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	1100	9,500	269	20.62	6.285
June 22	0830	*29,000	821	26.66	8.126
June 23	1745	6,490	184	16.56	5.047

Minimum discharge, no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.86	1.3	.00	1.6	.29	.00	213	136	55	2.5	252
2	.00	.66	.97	.00	1.6	.01	.20	53	90	47	4.2	122
3	.00	.50	.75	.24	1.6	.67	.34	37	63	42	7.0	72
4	.03	.43	.97	.27	1.4	1.3	.11	28	50	36	6.5	56
5	2.6	.20	.69	.20	1.4	.61	.00	24	40	28	6.1	75
6	2.4	.20	1.0	.43	1.4	.02	.00	21	31	24	5.4	69
7	.63	.20	.81	.43	1.4	.00	.00	18	26	21	4.4	47
8	.11	.17	.65	.46	1.2	.00	.00	16	23	26	3.8	39
9	1.3	.06	.47	.45	1.1	.00	.00	13	20	34	3.3	35
10	2.0	.04	.66	.43	.92	.00	.00	12	18	23	4.5	32
11	1.4	.00	1.0	.43	.49	.83	.00	9.9	15	19	813	728
12	.91	.00	1.3	.43	.57	1.2	.00	8.8	13	16	234	258
13	.43	.00	1.2	.77	.29	2.0	1.6	8.1	11	15	76	112
14	.20	.00	.85	.46	.03	1.5	81	7.4	10	13	256	121
15	.09	.26	1.2	.45	.00	1.3	33	6.7	9.3	12	984	57
16	.00	.30	3.4	.43	.00	.91	21	6.5	8.6	11	173	50
17	.00	.00	.19	.43	.00	.40	29	24	9.0	9.8	875	44
18	.00	.99	.02	.43	.00	.00	27	38	9.5	7.6	223	33
19	.00	1.0	.07	.43	.00	.00	19	17	14	5.4	113	27
20	.12	.06	.26	.57	.00	.08	17	101	143	4.8	105	24
21	.14	.00	.43	1.6	.00	.00	14	3160	1030	5.3	87	22
22	.00	.15	.43	.95	.00	.00	14	296	11600	6.5	69	27
23	.46	.34	.47	.89	.03	.00	13	244	2630	5.8	958	124
24	.63	.64	.41	1.0	.77	.00	12	179	735	5.1	234	55
25	.20	.88	.31	1.1	.95	.00	11	105	269	5.1	140	40
26	.00	3.2	.22	1.1	1.2	.00	9.4	75	300	6.8	102	33
27	.17	2.7	.29	1.1	.52	.00	8.0	63	236	5.3	81	29
28	.13	1.7	.24	1.4	.66	1.6	7.3	92	116	4.6	71	32
29	.68	1.4	.19	1.4	---	1.2	6.7	279	86	4.0	90	595
30	1.9	1.2	.08	1.6	---	.36	57	169	68	3.1	75	111
31	1.5	---	.00	1.6	---	.00	---	494	---	3.5	143	---
TOTAL	18.69	18.14	20.83	21.48	19.13	14.28	381.65	5818.4	17809.4	504.7	5949.7	3321
MEAN	.60	.60	.67	.69	.68	.46	12.7	188	594	16.3	192	111
MAX	2.6	3.2	3.4	1.6	1.6	2.0	81	3160	11600	55	984	728
MIN	.00	.00	.00	.00	.00	.00	.00	6.5	8.6	3.1	2.5	22
AC-FT	37	36	41	43	38	28	757	11540	35320	1000	11800	6590

CAL YR 1976 TOTAL 28978.99 MEAN 79.2 MAX 21700 MIN .00 AC-FT 57480
WTR YR 1977 TOTAL 33897.40 MEAN 92.9 MAX 11600 MIN .00 AC-FT 67240

07168000 FALL RIVER LAKE NEAR FALL RIVER, KS

LOCATION.--Lat 37°38'48", long 96°04'39", in NW¼NE¼ sec.3, T.28 S., R.12 E., Greenwood County, Hydrologic Unit 11070102, in right bank control tower at dam on Fall River, 4.0 mi (6.4 km) northwest of town of Fall River, and at mile 54.2 (87.2 km).

DRAINAGE AREA.--585 mi² (1,515 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--April 1949 to current year (monthly records only prior to October 1957). Prior to October 1971 published as "Fall River Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam. Spillway is a concrete, gravity, ogee-weir type. Regulated storage began Apr. 20, 1949. Conservation pool stage, elevation, 948.5 ft (289.10 m) was first reached June 5, 1949. Elevation of top of dam, 996.5 ft (303.73 m); maximum design pool, 990.0 ft (301.75 m); flood-control pool level, 987.5 ft (300.99 m), capacity, 259,000 acre-ft (319 hm³); and conservation pool level, 948.5 ft (289.10 m), capacity, 23,940 acre-ft (29.5 hm³), of which 17,000 acre-ft (21.0 hm³) is for pollution abatement. Reservoir was designed for flood control and conservation. Figures given herein represent total contents.

COOPERATION.--Elevations and contents furnished by Corps of Engineers; records reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 987.18 ft (300.892 m) July 13, 1951, contents, 260,200 acre-ft (321 hm³); minimum, 933.08 ft (284.403 m) Feb. 3, 1955, contents, 3,110 acre-ft (3.83 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 972.11 ft (296.299 m) June 26, contents, 128,600 acre-ft (159 hm³); minimum, 944.15 ft (287.777 m) Apr. 12, contents, 13,080 acre-ft (16.1 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made by Corps of Engineers, revised in 1977)

940	6,910	960	62,380
945	14,620	965	86,980
950	25,660	970	115,400
955	41,640	975	148,100

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	947.35	946.89	A	945.51	945.25	944.85	944.44	945.21	953.67	967.32	947.90	950.18
2	947.31	946.89		945.50	945.24	944.85	944.42	945.38	952.89	966.70	947.90	950.80
3	947.28	946.88		945.50	945.23	944.90	944.41	945.47	952.27	965.53	A	950.85
4	947.27	946.87		945.49	945.22	944.88	944.44	945.54	951.78	964.27		950.77
5	947.27	946.86		945.48	945.21	944.86	944.39	945.54	951.22	962.98		950.66
6	947.27	946.85		945.48	945.20	944.83	944.36	945.56	950.74	961.66		950.51
7	947.27	946.83	A	945.47	945.19	944.82	944.33	945.60	950.38	960.27	A	950.30
8	947.26	946.80	945.89	945.45	945.18	944.79	944.31	945.65	949.92	958.86	947.92	950.04
9	947.26	946.74	945.88	945.45	945.17	944.77	944.27	945.65	949.52	957.36	947.90	949.77
10	947.26	946.61	945.88	945.44	945.16	944.74	944.23	945.66	949.24	955.77	947.98	949.48
11	947.25	946.57	945.86	945.42	945.15	944.73	944.20	945.67	949.18	954.05	949.78	950.03
12	947.25	946.52	945.85	945.41	945.14	944.73	944.15	945.67	949.12	952.70	950.11	950.09
13	947.24	946.49	945.84	945.40	945.13	944.73	944.42	945.67	949.02	952.22	949.89	950.00
14	947.22	946.46	945.82	945.39	945.12	944.73	944.48	945.68	948.92	952.03	949.69	949.96
15	947.16	946.44	945.81	945.37	945.10	944.73	944.55	945.68	948.81	951.83	950.74	949.81
16	947.13	946.42	945.79	945.36	945.08	944.73	944.59	A	A	951.58	950.68	949.62
17	947.11	946.40	945.77	945.33	945.07	944.70	944.64	946.84	948.64	951.36	951.22	949.38
18	947.09	946.37	945.76	945.33	945.05	944.68	944.68	A	A	951.09	951.18	949.12
19	947.08	A	945.75	945.32	945.04	944.65	944.69	A	A	950.84	951.01	948.83
20	947.06		945.72	945.31	945.01	944.61	944.69	948.61	951.80	950.60	950.80	948.52
21	947.04		945.69	945.30	944.99	944.60	944.70	955.77	956.95	950.44	950.57	948.33
22	947.01		945.68	945.29	944.94	944.57	944.70	957.32	967.35	950.36	950.23	948.20
23	947.00		945.65	945.30	944.95	944.55	944.70	958.50	970.15	950.07	950.59	948.27
24	946.99		945.65	945.29	944.91	944.51	944.71	958.78	971.26	949.80	950.44	948.18
25	946.96		945.63	945.29	944.89	944.49	944.72	957.56	971.85	949.55	950.17	948.07
26	946.94		945.61	945.29	944.89	944.47	944.72	957.00	972.10	949.35	949.05	948.02
27	946.93		945.60	945.28	944.89	944.48	944.72	955.98	971.63	949.11	949.52	948.00
28	946.91		945.58	945.27	944.88	944.45	944.73	955.26	970.75	948.87	949.55	948.32
29	946.90		945.56	945.27	---	944.51	944.73	955.00	969.81	948.61	949.75	948.49
30	946.90	A	945.53	945.26	---	944.49	945.01	954.51	968.85	948.35	949.66	949.77
31	946.90	---	945.51	945.26	---	944.47	---	954.31	---	948.08	949.50	---
MEAN	947.12	---	---	945.37	945.08	944.67	944.54	---	---	954.24	---	949.42
MAX	947.35	946.89	945.89	945.51	945.25	944.90	945.01	958.78	972.10	967.32	951.22	950.85
MIN	946.90	946.37	945.51	945.26	944.88	944.45	944.15	945.21	948.64	948.08	947.90	948.00
(+)	18,350	16,660	15,580	15,100	14,400	13,650	14,640	39,120	108,500	20,930	24,350	25,050
(♦)	-1,010	-1,690	-1,080	-480	-700	-750	+990	+24,480	+69,380	-87,570	+3,420	+700

CAL YR 1976 .... (♦) -3,580
WTR YR 1977 .... (♦) +5,690

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
♦ CHANGE IN CONTENTS, IN ACRE-FEET.
A NO GAGE-HEIGHT RECORD.

07168500 FALL RIVER NEAR FALL RIVER, KS

LOCATION.--Lat 37°38'34", long 96°03'33", in SW¼NE¼ sec.2, T.28 S., R.12 E., Greenwood County, Hydrologic Unit 11070102, near left bank on downstream side of highway bridge, 0.3 mi (0.5 km) downstream from Fall River Dam, 2.5 mi (4.0 km) upstream from Salt Creek, 3.0 mi (4.8 km) northwest of town of Fall River, and at mile 53.9 (86.7 km).

DRAINAGE AREA.--585 mi² (1,515 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1904 to September 1905 (gage heights only) published as "at Fall River", May 1939 to current year. Monthly discharge only for May 1939, published in WSP 1311.

REVISED RECORDS.--WSP 1147: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 898.44 ft (273.845 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 30, 1905, nonrecording gage at site 4.7 mi (7.6 km) downstream at datum 21.6 ft (6.58 m) lower. May 5, 1939, to June 12, 1946, nonrecording gage at present site and datum. June 13 to Aug. 26, 1946, nonrecording gage and Aug. 27, 1946, to Sept. 30, 1957, water-stage recorder, at site 3.1 mi (5.0 km) downstream at datum 12.79 ft (3.898 m) lower.

REMARKS.--Records good. Flow regulated since 1949 by Fall River Lake, 0.3 mi (0.5 km) above station (see sta 07168000).

COOPERATION.--Gage-height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--38 years, 340 ft³/s (9.629 m³/s), 246,300 acre-ft/yr (304 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,600 ft³/s (1,290 m³/s) Apr. 16, 1945, gage height, 31.15 ft (9.495 m), present site and datum; no flow at times in 1939-40, 1946, 1955, 1967, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,910 ft³/s (111 m³/s) June 27, gage height, 10.76 ft (3.280 m); no flow part of day Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	18	21	13	14	15	16	16	1840	3700	151	509
2	13	18	21	12	14	16	16	16	1820	3660	20	517
3	13	18	20	12	14	15	16	16	1420	3610	21	521
4	14	19	20	12	14	15	16	16	1130	3560	21	520
5	14	20	20	12	14	15	16	16	1120	3500	21	520
6	14	21	19	12	14	16	16	16	910	3440	21	520
7	14	22	18	12	13	16	17	16	755	3380	21	518
8	14	22	17	12	14	16	17	16	748	3330	21	516
9	15	130	17	13	14	16	17	16	744	3250	21	512
10	13	85	17	12	14	16	18	16	428	3190	21	509
11	13	17	16	12	14	16	18	16	166	3130	23	509
12	14	17	16	12	14	16	17	16	161	2220	326	513
13	14	16	16	12	14	16	18	17	161	762	514	510
14	15	16	16	12	15	16	17	17	166	333	512	508
15	15	17	16	12	15	16	17	17	161	332	517	508
16	15	17	16	12	15	16	17	17	78	332	520	508
17	15	17	16	12	15	16	17	17	22	331	520	505
18	15	18	16	13	15	16	17	18	23	330	523	503
19	15	18	16	12	15	16	17	18	23	329	523	501
20	15	18	16	13	16	16	17	19	24	326	520	500
21	15	20	15	13	16	16	17	22	26	325	519	349
22	15	21	16	13	16	16	17	22	14	326	517	239
23	16	20	17	13	15	17	17	22	1.3	325	517	239
24	16	20	17	13	15	17	17	792	1.1	323	519	239
25	16	21	17	14	15	17	17	2300	.90	321	518	239
26	17	21	17	14	15	17	17	2780	1360	317	515	135
27	18	20	17	14	16	17	17	2440	3130	313	511	61
28	18	19	17	14	16	17	17	1900	3840	313	507	62
29	18	19	17	15	---	17	17	1880	3790	312	510	63
30	18	19	16	15	---	16	16	1870	3760	312	512	63
31	18	---	15	14	---	16	---	1860	---	309	509	---
TOTAL	459.7	744	531	396	411	499	506	16220	27779.30	46541	10491	11916
MEAN	14.8	24.8	17.1	12.8	14.7	16.1	16.9	523	926	1501	338	397
MAX	18	130	21	15	16	17	18	2780	3840	3700	523	521
MIN	4.7	16	15	12	13	15	16	16	.90	309	20	61
AC-FT	912	1480	1050	785	815	990	1000	32170	55100	92310	20810	23640

CAL YR 1976 TOTAL 56123.31 MEAN 153 MAX 4450 MIN .03 AC-FT 111300
WTR YR 1977 TOTAL 116494.80 MEAN 319 MAX 3840 MIN .90 AC-FT 231100

07169500 FALL RIVER AT FREDONIA, KS

LOCATION.--Lat 37°30'30", long 95°50'00", in SW¼NW¼ sec.24, T.29 S., R.14 E., Wilson County, Hydrologic Unit 11070102, on downstream side of left pier of bridge on State Highway 96, 0.8 mi (1.3 km) upstream from Clear Creek, 1.0 mi (1.6 km) downstream from Salt Creek, 1.0 mi (1.6 km) south of Fredonia, and at mile 25.3 (40.7 km).

DRAINAGE AREA.--827 mi² (2,142 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for October and November 1938, published in WSP 1311. Published as "near Fredonia" 1952-57.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1341: 1939-40.

GAGE.--Water-stage recorder. Datum of gage is 819.09 ft (249.659 m) above mean sea level (levels by Corps of Engineers). Prior to Dec. 21, 1949, nonrecording gage at same site and datum.

REMARKS.--Records good. Considerable regulation since 1949 by Fall River Lake 28.9 mi (46.5 km) above (see sta 07168000) and during low flow by Fredonia City Water Reservoir 1.0 mi (1.6 km) upstream.

COOPERATION.--Gage-height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--39 years, 476 ft³/s (13.48 m³/s), 344,900 acre-ft/yr (425 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,000 ft³/s (1,390 m³/s) Apr. 16, 1945, gage height, 36.17 ft (11.025 m); no flow at times in 1939-40.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1904, that of Apr. 16, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,400 ft³/s (493 m³/s), June 22, gage height, 27.19 ft (8.288 m); no other peaks above regulated base of 8,000 ft³/s (227 m³/s); minimum discharge, 5.9 ft³/s (0.167 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	30	23	19	17	20	22	33	1930	3820	383	556
2	8.0	27	22	19	17	21	20	210	1890	3790	197	540
3	6.7	34	23	20	18	23	20	98	1800	3740	72	531
4	12	23	24	20	19	23	20	63	1150	3680	69	535
5	147	27	23	20	20	21	20	61	1090	3640	64	586
6	103	30	24	20	20	20	19	41	1040	3590	58	568
7	43	30	24	19	19	20	19	32	730	3540	53	558
8	27	33	21	19	19	20	20	27	694	3510	52	545
9	21	34	23	17	20	20	19	24	684	3440	51	541
10	20	141	23	17	19	20	19	23	672	3370	50	538
11	20	114	23	17	19	46	18	21	312	3300	782	721
12	19	33	23	16	26	40	18	19	197	3180	602	690
13	17	24	22	18	24	33	21	18	193	1560	557	572
14	20	25	22	20	21	26	895	18	197	496	558	568
15	19	25	22	20	20	22	202	18	189	430	665	623
16	20	23	22	19	20	20	113	22	185	427	617	650
17	21	23	22	17	20	20	84	129	110	424	567	620
18	23	24	22	16	21	20	65	83	167	421	597	568
19	23	25	23	18	22	19	64	56	901	416	565	543
20	22	31	22	18	20	18	61	74	2200	411	548	535
21	21	31	22	20	19	18	56	2520	1770	409	534	539
22	22	31	22	20	21	18	50	1100	15600	526	527	310
23	23	31	22	20	21	17	45	233	11300	490	716	290
24	24	33	22	21	19	17	41	194	2690	417	720	283
25	24	29	23	21	18	18	34	1530	914	400	569	277
26	23	28	23	20	21	18	29	2690	514	398	539	278
27	24	23	23	20	23	19	27	2730	2610	398	522	177
28	26	23	23	18	22	28	24	2080	3770	391	798	110
29	28	22	22	18	---	33	23	1940	3920	389	672	1440
30	37	23	21	18	---	28	25	2080	3870	385	546	337
31	35	---	18	17	---	22	---	2010	---	383	530	---
TOTAL	885.7	1030	694	582	565	708	2093	20177	63289	51771	13780	15629
MEAN	28.6	34.3	22.4	18.8	20.2	22.8	69.8	651	2110	1670	445	521
MAX	147	141	24	21	26	46	895	2730	15600	3820	798	1440
MIN	6.7	22	18	16	17	17	18	18	110	383	50	110
AC-FT	1760	2040	1380	1150	1120	1400	4150	40020	125500	102700	27330	31000

CAL YR 1976 TOTAL 109762.7 MEAN 300 MAX 21600 MIN 6.7 AC-FT 217700
WTR YR 1977 TOTAL 171203.7 MEAN 469 MAX 15600 MIN 6.7 AC-FT 339600

07169800 ELK RIVER AT ELK FALLS, KS

LOCATION.--Lat 37°22'32", long 96°11'07", in SW¼SE¼SE¼ sec.3, T.31 S., R.11 E., Elk County, Hydrologic Unit 11070104, at downstream side of bridge on U.S. Highway 160 in Elk Falls, 2.0 mi (3.2 km) upstream from Wild Cat Creek, and at mile 57.5 (92.5 km).

DRAINAGE AREA.--220 mi² (570 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 897.300 ft (273.497 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records fair.

COOPERATION.--Gage-height record and 18 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--10 years, 186 ft³/s (5.268 m³/s), 134,800 acre-ft/yr (166 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 200,000 ft³/s (5,660 m³/s) July 3, 1976, gage height, 34.85 ft (10.622 m); no flow at times in 1967, 1970-72.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 13	2130	6,420	182	13.77	4.197
May 21	1345	9,100	258	16.83	5.130
June 22	1130	*24,100	683	24.21	7.379

Minimum discharge, 1.5 ft³/s (0.042 m³/s) Dec. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	12	3.5	2.0	3.4	3.4	9.2	225	235	198	10	79
2	2.0	10	3.5	2.4	3.5	3.4	8.9	170	176	166	10	75
3	1.9	8.3	3.5	2.7	3.5	12	8.2	120	140	138	10	54
4	2.0	7.3	3.5	3.0	3.6	12	7.4	100	114	112	13	41
5	76	7.0	3.5	3.0	3.9	8.1	7.4	87	93	87	14	37
6	47	6.9	3.7	3.0	3.8	6.2	6.9	79	75	73	15	35
7	24	6.8	3.9	3.0	4.0	5.4	5.7	71	64	62	16	41
8	14	6.3	4.2	2.5	4.0	4.9	5.0	61	53	59	12	36
9	9.6	6.0	4.4	2.0	4.2	4.4	4.6	55	48	56	11	24
10	6.9	5.4	3.8	2.0	4.2	4.0	3.9	48	44	51	9.5	18
11	6.1	4.9	1.9	2.5	4.4	24	3.4	42	38	46	807	26
12	5.1	4.7	2.4	3.0	5.2	24	3.1	39	33	44	616	123
13	4.7	4.5	2.9	3.7	6.7	15	1590	35	29	41	264	82
14	4.6	4.4	3.2	3.8	5.9	11	934	31	27	37	161	74
15	3.6	4.2	3.3	3.0	5.6	9.2	179	28	24	33	151	101
16	3.8	4.0	3.4	2.5	5.2	7.4	103	25	21	30	153	217
17	3.9	4.0	3.4	2.5	4.5	6.5	97	49	20	26	169	121
18	3.6	3.8	5.2	3.0	3.9	5.7	80	71	19	23	236	80
19	5.6	3.7	4.7	3.7	3.8	5.4	80	51	21	21	162	53
20	6.9	3.7	4.4	3.7	3.7	5.1	78	147	31	18	151	40
21	7.7	3.5	4.3	3.7	3.6	4.9	71	4410	600	17	147	35
22	6.9	3.5	3.9	3.5	3.4	4.7	65	1270	16500	179	126	35
23	6.5	3.4	3.3	3.3	3.3	4.0	63	792	4280	98	408	30
24	7.2	3.4	3.1	3.4	3.3	3.6	58	545	2200	39	362	26
25	6.0	3.4	3.3	3.8	3.3	3.4	51	287	1630	23	227	24
26	5.3	3.4	3.2	3.1	3.3	3.4	45	223	1240	18	186	26
27	5.1	3.4	3.4	3.4	3.3	3.4	41	189	943	22	145	24
28	4.6	3.4	4.1	3.8	3.3	25	37	186	747	22	117	21
29	5.0	3.5	4.4	4.0	---	28	35	350	400	16	131	23
30	13	3.5	2.8	3.5	---	15	50	457	248	13	118	25
31	13	---	2.5	3.4	---	11	---	316	---	12	94	---
TOTAL	313.4	152.3	110.6	95.9	113.8	283.5	3730.7	10559	30093	1780	5031.5	1626
MEAN	10.1	5.08	3.57	3.09	4.06	9.15	125	341	1003	57.4	162	54.2
MAX	76	12	5.2	4.0	6.7	28	1590	4410	16500	198	807	217
MIN	1.8	3.4	1.9	2.0	3.3	3.4	3.1	25	19	12	9.5	18
AC-FT	622	302	219	190	226	562	7400	20940	59690	3530	9980	3230

CAL YR 1976 TOTAL 77185.55 MEAN 211 MAX 47500 MIN .91 AC-FT 153100
WTR YR 1977 TOTAL 53897.70 MEAN 148 MAX 16500 MIN 1.8 AC-FT 106900

07170050 ELK CITY LAKE NEAR INDEPENDENCE, KS

LOCATION.--Lat 37°16'39", long 95°46'37", in SW¼SW¼NW¼ sec.9, T.32 S., R.15 E., Montgomery County, Hydrologic Unit 11070104, in gate tower of Elk City Dam, on Elk River, 5.0 mi (8.0 km) northwest of Independence, and at mile 8.7 (14.0 km).

DRAINAGE AREA.--634 mi² (1,642 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--March 1966 to current year. Prior to October 1971 published as "Elk City Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by compacted earthfill dam. Storage began Mar. 17, 1966. Total capacity 514,300 acre-ft (634 hm³), consisting of the following: Sedimentation, 348 acre-ft (0.429 hm³) below elevation 764.0 ft (232.87 m); conservation, 28,660 acre-ft (35.3 hm³) between elevations 764.0 ft (232.87 m) and 792.0 ft (241.40 m); flood control, 255,300 acre-ft (315 hm³) between elevations 792.0 ft (241.40 m) and 825.0 ft (251.46 m); uncontrolled storage, 230,000 acre-ft (284 hm³) between elevations 825.0 ft (251.46 m) and 838.0 ft (255.42 m). Reservoir is designed for flood control, pollution control, conservation and recreation. Figures given herein represent total contents.

COOPERATION.--Records furnished by Corps of Engineers; reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 826.32 ft (251.862 m) July 6, 1976, contents, 302,300 acre-ft (373 hm³); minimum since conservation pool first reached, 781.25 ft (238.125 m) Apr. 12, 1967, contents, 8,090 acre-ft (9.97 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 820.12 ft (249.973 m) June 26, contents, 226,100 acre-ft (279 hm³); minimum, 791.81 ft (241.344 m) Sept. 10, contents, 28,350 acre-ft (35.0 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made in 1977 by Corps of Engineers)

790	22,570	805	94,820	820	224,800
795	40,460	810	131,500	825	284,300
800	64,500	815	175,000	830	357,900

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	791.87	792.67	792.63	792.60	792.78	793.02	793.63	796.61	798.93	813.27	792.72	792.11
2	791.87	792.70	792.63	792.60	792.79	793.07	793.62	797.09	798.62	811.54	792.60	791.89
3	791.85	792.71	792.63	792.60	792.81	793.06	793.63	797.06	798.32	809.67	792.55	791.89
4	791.93	792.70	792.63	792.64	792.82	793.06	793.66	796.90	798.07	807.74	792.45	791.89
5	792.08	792.72	792.65	792.64	792.82	793.06	793.65	796.71	797.78	805.71	792.33	791.84
6	792.25	792.71	792.63	792.64	792.82	793.12	793.65	796.61	797.46	803.54	792.22	791.87
7	792.31	792.71	792.63	792.65	792.82	793.12	793.67	796.31	797.14	801.20	792.07	791.82
8	792.37	792.73	792.63	792.66	792.82	793.14	793.69	796.08	796.81	799.35	792.01	791.82
9	792.37	792.75	792.63	792.66	792.83	793.15	793.69	795.96	796.43	797.96	792.02	791.83
10	792.39	792.73	792.62	792.66	792.84	793.17	793.69	795.96	796.30	796.35	792.00	791.81
11	792.40	792.70	792.63	792.66	792.90	793.29	793.67	795.96	796.25	794.82	792.44	794.20
12	792.42	792.66	792.63	792.68	792.96	793.30	793.67	795.96	796.21	793.35	793.24	795.09
13	792.42	792.67	792.64	792.70	792.97	793.34	793.65	795.98	796.19	792.52	793.69	794.84
14	792.43	792.68	792.65	792.70	792.97	793.38	794.73	795.99	796.19	792.23	794.62	794.74
15	792.38	792.68	792.65	792.70	792.97	793.37	795.03	796.00	796.17	792.23	794.79	794.99
16	792.35	792.69	792.67	792.69	792.97	793.39	795.18	796.01	796.16	792.24	793.76	795.18
17	792.35	792.71	792.67	792.70	793.01	793.42	795.26	A	796.13	792.26	792.72	795.08
18	792.34	792.73	792.68	792.68	793.01	793.43	795.36	796.16	796.11	792.24	792.19	794.74
19	792.32	792.70	792.66	792.70	793.01	793.41	795.43	796.22	796.25	792.23	792.13	794.43
20	792.33	792.70	792.64	792.70	793.02	793.42	795.51	796.32	796.24	792.23	792.00	794.08
21	792.31	792.69	792.66	792.71	793.05	793.39	795.56	799.00	797.42	792.24	791.92	793.74
22	792.33	792.69	792.65	792.71	793.10	793.41	795.61	801.25	810.40	792.32	792.00	793.36
23	A	792.69	792.65	792.73	793.04	793.40	795.68	801.82	816.10	792.41	792.46	793.14
24	|	792.68	792.66	792.75	793.03	793.42	795.71	801.98	818.21	792.48	792.61	793.17
25	A	792.72	792.65	792.75	793.00	793.42	795.74	801.30	819.97	792.46	792.64	793.18
26	792.44	792.67	792.66	792.75	793.03	793.44	795.77	800.34	819.99	792.65	792.60	793.21
27	792.46	792.62	792.66	792.77	793.03	793.44	795.82	799.67	819.12	792.70	792.53	793.21
28	792.46	792.62	792.64	792.77	793.04	793.51	795.83	799.61	817.87	792.73	793.10	793.35
29	792.52	792.61	792.65	792.77	---	793.56	795.85	799.42	816.57	792.75	793.30	793.98
30	792.55	792.63	792.61	792.77	---	793.57	795.90	799.27	814.92	792.76	793.13	794.07
31	792.61	---	792.61	792.77	---	793.58	---	799.16	---	792.76	792.63	---
MEAN	---	792.69	792.64	792.69	792.94	793.32	794.72	---	802.94	796.48	792.69	793.35
MAX	792.61	792.75	792.68	792.77	793.10	793.58	795.90	801.98	819.99	813.27	794.79	795.18
MIN	791.85	792.61	792.61	792.60	792.78	793.02	793.62	795.96	796.11	792.23	791.92	791.81
(†)	31,180	31,250	31,180	31,760	32,740	34,760	44,310	60,020	174,200	31,720	31,250	36,680
(‡)	+2,620	+70	-70	+580	+980	+2,020	+9,550	+15,710	+114,180	-142,480	-470	+5,430

CAL YR 1976 .... (‡) +1,110
WTR YR 1977 .... (‡) +8,120

† CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.
A NO GAGE-HEIGHT RECORD.

07170060 ELK RIVER BELOW ELK CITY LAKE, KS

LOCATION.--Lat 37°16'46", long 95°46'53", in NW¼SW¼NW¼ sec.9, T.32 S., R.16 E., Montgomery County, Hydrologic Unit 11070104, near left bank, 600 ft (183 m) below Elk City Dam, and at mile 8.6 (13.8 km).

DRAINAGE AREA.--634 mi² (1,642 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year. Prior to October 1971, published as "below Elk City Reservoir".

GAGE.--Water-stage recorder. Datum of gage is 740.00 ft (225.552 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good. Flow completely regulated by Elk City Dam 600 ft (183 m) upstream (see sta 07170050).

COOPERATION.--Gage-height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--12 years, 432 ft³/s (12.23 m³/s), 313,000 acre-ft/yr (386 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft³/s (275 m³/s) July 7, 1976, gage height, 29.73 ft (9.062 m); no flow at times in 1966, 1967, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,600 ft³/s (244 m³/s) June 28, gage height, 27.84 ft (8.486 m); minimum, 0.40 ft³/s (0.011 m³/s) Mar. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.9	2.5	.50	1.1	1.0	1.4	8.8	1060	8200	137	1040
2	2.2	2.7	2.4	.50	.93	1.0	1.5	364	1050	8000	286	655
3	2.4	2.5	2.2	.50	.86	1.1	1.5	601	845	7800	273	121
4	2.5	2.6	2.2	.50	.86	1.2	1.6	595	761	7700	256	121
5	2.8	2.7	2.2	.50	.86	1.2	1.6	591	763	7500	256	118
6	2.6	2.7	2.2	.50	.94	1.1	1.6	592	759	7350	257	116
7	2.6	2.7	2.1	.55	.95	.94	1.6	581	746	7050	255	56
8	2.6	2.7	2.0	.58	.95	.90	1.6	592	780	5330	111	13
9	2.6	2.7	1.3	.58	.95	.98	1.6	248	779	3720	12	13
10	2.6	2.7	.89	.58	1.0	.78	1.7	22	761	3280	12	13
11	2.5	2.7	.86	.58	1.1	.85	1.7	22	337	3210	12	13
12	2.5	2.7	.91	.60	1.3	.67	1.7	21	149	2800	12	262
13	2.5	2.7	.91	.65	1.1	.66	4.9	12	148	1460	12	793
14	2.5	2.7	.86	.68	1.2	.54	3.5	7.6	39	469	12	798
15	2.5	2.7	.86	.68	1.2	.72	3.6	7.5	22	8.2	568	849
16	2.6	2.7	.86	.73	1.2	.73	3.6	7.4	21	7.5	2190	796
17	2.6	2.7	.91	.77	1.2	.80	3.6	7.5	23	7.6	2470	779
18	2.6	2.7	.86	.77	1.2	.94	3.6	7.4	23	8.2	1320	776
19	2.6	2.7	.95	.77	1.2	.96	3.7	7.4	27	15	425	769
20	2.6	2.6	1.0	.77	1.2	.93	4.2	7.3	27	15	424	765
21	2.6	2.6	.95	.77	1.1	1.1	3.9	8.0	27	15	222	767
22	2.6	2.6	1.0	.70	1.0	1.1	3.7	8.7	20	15	13	770
23	2.7	2.6	.93	.59	1.1	1.0	3.7	8.6	10	14	196	602
24	2.7	2.6	.86	.64	1.1	1.0	6.4	819	10	12	378	374
25	2.7	2.6	.79	.68	.95	1.0	6.8	2550	10	12	379	14
26	2.7	2.4	.60	.68	1.1	1.1	6.8	3010	2160	13	374	6.6
27	2.7	2.5	.59	.71	1.1	1.2	6.9	2030	6840	10	373	10
28	2.7	2.6	.55	1.2	1.0	1.2	7.2	1070	8550	7.3	382	10
29	2.8	2.6	.45	1.1	---	1.3	7.3	1060	8450	8.5	379	10
30	2.9	2.6	.45	1.1	---	1.3	7.4	1060	8330	8.6	664	242
31	2.9	---	.50	1.1	---	1.4	---	1080	---	8.8	1040	---
TOTAL	80.4	79.5	36.64	22.04	29.75	30.76	107.7	17517.4	42796	73709.7	13700	11469.6
MEAN	2.59	2.65	1.18	.71	1.06	.99	3.59	565	1427	2378	442	382
MAX	2.9	2.9	2.5	1.2	1.3	1.4	7.4	3010	8550	8200	2470	1040
MIN	2.0	2.4	.45	.50	.86	.54	1.4	7.3	10	7.3	12	6.6
AC-FT	160	158	73	44	59	61	214	34750	84890	146200	27170	22750

CAL YR 1976 TOTAL 175908.27 MEAN 481 MAX 8920 MIN .10 AC-FT 348900
WTR YR 1977 TOTAL 159079.49 MEAN 436 MAX 8550 MIN .45 AC-FT 315500

07170500 VERDIGRIS RIVER AT INDEPENDENCE, KS

LOCATION.--Lat 37°13'26", long 95°40'43", in NW¼NE¼NE¼ sec.32, T.32 S., R.16 E., Montgomery County, Hydrologic Unit 11070103, near right bank at downstream side of bridge on U.S. Highway 160, 1.0 mi (1.6 km) east of Independence, 3.6 mi (5.8 km) downstream from Elk River, and at mile 194.3 (312.6 km).

DRAINAGE AREA.--2,892 mi² (7,490 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1895 to September 1904 (monthly figures only, published in WSP 1311), October 1921 to current year.

REVISED RECORDS.--WSP 977: 1922, 1927-29. WSP 1117: Drainage area. WSP 1341: 1923-25(M), 1939.

GAGE.--Water-stage recorder. Datum of gage is 716.63 ft (218.429 m) above mean sea level. Aug. 2, 1895, to Nov. 30, 1903, nonrecording gage at former milldam 5.0 mi (8.0 km) downstream and 2.5 mi (4.0 km) northwest of Liberty, at datum about 4.00 ft (1.219 m) lower. Apr. 20 to Sept. 25, 1904, nonrecording gage at Myrtle Street highway bridge 0.8 mi (1.3 km) upstream at different datum. Nov. 14, 1921, to Sept. 30, 1929, nonrecording gage at Myrtle Street bridge at datum 0.87 ft (0.265 m) higher than present datum. Oct. 1, 1929, to Dec. 25, 1933, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow regulated since 1949 by Fall River Lake (see sta 07168000) and since 1960 by Toronto Lake (see sta 07165900). Since 1966, some regulation by Elk City Lake (see sta 07170050).

COOPERATION.--Gage height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--65 years, 1,681 ft³/s (47.61 m³/s), 1,218,000 acre-ft/yr (1.50 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft³/s (3,310 m³/s) Apr. 17, 1945, gage height, 47.28 ft (14.411 m); maximum gage height, 47.60 ft (14.508 m) May 19, 1943; no flow at times in 1932, 1934, 1936, 1939-40, 1953-55.
Maximum stage known since at least 1885, that of May 19, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 14,000 ft³/s (396 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 24	0015	*31,600	895	38.67	11.787
June 30	1500	15,500	439	24.41	7.440

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	55	46	50	35	37	72	654	6020	15200	559	2600
2	35	50	45	49	34	36	66	562	5700	14800	751	2500
3	31	44	55	48	31	38	58	824	5450	14500	622	1460
4	26	39	66	50	32	39	56	717	4710	14100	650	1290
5	509	37	64	50	31	39	50	675	3450	13800	635	1250
6	568	36	63	50	31	39	44	729	3320	13500	612	1310
7	250	35	63	49	32	40	42	697	3160	12500	608	1210
8	130	33	61	49	32	39	40	678	2910	10600	542	1120
9	88	32	62	47	33	38	38	857	2870	7200	412	1120
10	67	32	60	46	32	36	37	206	2600	6920	403	1090
11	53	61	60	47	32	96	36	123	1850	6780	923	2690
12	43	198	60	45	86	210	35	104	731	6500	4390	1920
13	37	121	59	44	99	179	35	81	460	4770	1440	2110
14	34	77	58	43	85	125	122	59	376	2250	1710	2010
15	32	57	58	44	69	104	698	45	327	995	3200	3030
16	30	45	57	44	58	85	318	66	233	936	3510	2640
17	29	40	57	44	47	75	221	248	196	908	4070	2370
18	30	38	57	43	41	65	189	177	138	895	3100	2180
19	30	36	58	42	37	55	185	138	2480	883	1630	1990
20	32	35	57	41	35	49	175	265	6140	861	1570	1870
21	33	37	56	40	33	43	172	4140	11900	763	1430	1880
22	33	46	56	40	33	40	166	6240	27200	781	1110	1750
23	31	52	55	41	34	38	186	1850	30000	856	1750	1210
24	44	61	55	43	32	37	141	1260	30700	633	1870	1050
25	41	66	55	42	32	36	149	3490	27700	552	1510	931
26	37	70	55	41	32	38	123	6780	11300	561	1380	801
27	35	65	54	40	34	38	108	7570	7270	591	1320	514
28	35	58	54	39	36	51	97	6680	13300	541	2100	437
29	36	56	53	37	---	68	87	6450	14100	529	4010	7490
30	54	51	52	37	---	83	93	6660	15400	521	2350	6210
31	56	---	51	36	---	84	---	6570	---	512	2410	---
TOTAL	2533	1663	1762	1361	1178	1980	3887	65595	241991	155718	52569	60033
MEAN	81.7	55.4	56.8	43.9	42.1	63.9	130	2116	8066	5023	1696	2001
MAX	568	198	66	50	99	210	698	7570	30700	15200	4390	7490
MIN	26	32	45	36	31	36	35	45	138	512	403	437
AC-FT	5020	3300	3490	2700	2340	3930	7710	130100	480000	308900	104300	119100

CAL YR 1976 TOTAL 449882 MEAN 1229 MAX 41600 MIN 26 AC-FT 892300
WTR YR 1977 TOTAL 590270 MEAN 1617 MAX 30700 MIN 26 AC-FT 1171000

07170700 BIG HILL CREEK NEAR CHERRYVALE, KS

LOCATION.--Lat 37°16'00", long 95°28'05", in SE¼SE¼ sec.7, T.32 S., R.18 E., Labette County, Hydrologic Unit 11070103, on right downstream abutment of bridge on county road, 4.3 mi (6.9 km) east of Cherryvale, and at mile 32.5 (52.3 km).

DRAINAGE AREA.--37 mi² (96 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 795.93 ft (242.599 m) above mean sea level (levels by Corps of Engineers). Prior to May 6, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good.

COOPERATION.--Gage-height record, 24 discharge measurements and 1 observation of no flow furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--20 years, 27.5 ft³/s (0.779 m³/s), 19,920 acre-ft/yr (24.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft³/s (1,020 m³/s) July 3, 1976, gage height, 23.02 ft (7.016 m), no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in 1951 reached a stage of 18.92 ft (5.767 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	1300	1,200	34.0	14.34	4.371	June 22	0315	* 8,960	254	19.24	5.864
June 20	1445	1,580	44.7	15.35	4.679	Sept. 29	0700	2,570	72.8	16.37	4.990

Minimum discharge, no flow Oct. 1-4, Jan. 1, 17, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	8.4	.08	.02	.06	.80	4.1	3.6	13	41	.41	94
2	.00	3.1	.06	.02	.06	1.2	2.9	22	6.1	17	.36	34
3	.00	.90	.07	.03	.08	1.9	2.2	10	3.4	10	.37	15
4	.02	.40	.10	.04	.09	1.7	1.7	5.4	1.9	6.7	.51	7.5
5	71	.32	.10	.06	.10	2.5	1.2	2.9	.99	4.6	.26	4.6
6	53	.34	.14	.06	.09	2.9	.91	1.5	.60	3.0	.25	3.1
7	11	.28	.14	.07	.10	3.0	.78	.85	.42	2.8	.08	1.9
8	3.1	.28	.12	.07	.18	2.3	.74	.60	.33	5.0	.28	1.1
9	.80	.28	.12	.05	.10	1.8	.72	.42	.29	3.7	.35	.87
10	.40	.28	.12	.04	.10	1.4	.35	.32	.24	3.6	.38	.36
11	.22	.24	.12	.04	.14	7.5	.32	.30	.19	2.9	.33	1.8
12	.20	.22	.10	.03	15	43	.34	.23	.16	1.9	.32	1.3
13	.16	.18	.10	.04	27	16	.31	.17	.13	1.5	.33	.83
14	.14	.18	.09	.06	14	8.4	.27	.14	.09	.98	1.5	1.5
15	.12	.18	.09	.06	8.0	5.6	.24	.09	.08	.99	3.1	79
16	.09	.18	.09	.05	5.1	3.8	.24	83	.06	.93	.69	39
17	.08	.18	.08	.02	3.3	2.6	.22	120	.05	.96	.70	17
18	.06	.20	.08	.05	2.4	2.2	.18	50	.09	.82	.62	37
19	.08	.20	.08	.02	1.5	1.6	.14	27	292	.67	.29	22
20	.08	.20	.07	.03	1.5	1.4	.09	112	657	.59	.21	9.9
21	.08	.16	.05	.04	.90	.90	.12	582	273	.46	.18	5.8
22	.08	.16	.04	.04	.85	.73	.20	66	3930	.92	.12	4.6
23	.09	.16	.04	.14	.68	.70	.36	23	398	.74	3.3	4.6
24	.80	.16	.03	.20	.63	.66	.46	13	114	.47	3.5	38
25	.50	.16	.04	.22	.58	.65	1.9	7.8	691	.37	.89	16
26	.30	.16	.04	.26	.72	.65	.40	5.0	78	.39	.47	6.8
27	.18	.12	.04	.26	.80	.70	.40	3.3	36	.35	.39	6.8
28	.38	.10	.04	.22	.81	1.7	.22	35	20	.30	31	3.7
29	.46	.10	.04	.12	---	6.3	.12	102	13	.34	80	890
30	.90	.09	.04	.09	---	5.6	.09	37	32	.52	15	66
31	2.9	---	.01	.07	---	6.0	---	16	---	.74	5.3	---
TOTAL	147.24	17.91	2.36	2.52	85.07	136.19	22.62	1330.62	6562.12	115.24	151.29	1405.06
MEAN	4.75	.60	.076	.081	3.04	4.39	.75	42.9	219	3.72	4.88	46.8
MAX	71	8.4	.14	.26	27	43	4.1	582	3930	41	80	890
MIN	.00	.09	.01	.02	.06	.65	.09	.09	.05	.30	.08	.36
AC-FT	292	36	4.7	5.0	169	270	45	2640	13020	229	300	2790

CAL YR 1976 TOTAL 15158.61 MEAN 41.4 MAX 10700 MIN .00 AC-FT 30070
WTR YR 1977 TOTAL 9978.24 MEAN 27.3 MAX 3930 MIN .00 AC-FT 19790

07172000 CANEY RIVER NEAR ELGIN, KS

LOCATION.--Lat 37°00'13", long 96°18'54", in NW¼NW¼SE¼ sec.16, T.35 S., R.10 E., Chautauqua County, Hydrologic Unit 11070106, at county highway bridge, 2 mi (3 km) west of Elgin, and at mile 117.8 (189.5 km).

DRAINAGE AREA.--445 mi² (1,153 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.-October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 763.32 ft (232.660 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 13, 1961, at site 300 ft (91.4 m) downstream at same datum.

REMARKS.--Records fair.

COOPERATION.--Gage-height record and 17 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--39 years, 242 ft³/s (6.853 m³/s), 175,300 acre-ft/yr (216 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,000 ft³/s (1,760 m³/s) Sept. 13, 1961, gage height, 34.70 ft (10.577 m), from floodmarks; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	1015	17,200	487	18.79	5.727	Aug. 19	1745	11,500	326	14.25	4.343
May 23	1145	7,220	204	10.39	3.167	Sept. 28	1730	7,780	220	10.90	3.322
June 22	1730	*29,300	830	26.10	7.955						

Minimum discharge, no flow Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	4.4	2.0	3.1	4.3	3.6	5.0	1080	898	1010	20	206
2	7.1	3.7	2.0	2.9	4.0	4.0	6.0	830	621	775	19	165
3	7.1	2.4	1.9	2.9	4.0	4.7	7.1	521	466	524	17	140
4	7.9	3.3	2.8	3.0	4.0	12	7.6	346	358	306	17	118
5	22	2.3	4.4	2.9	4.1	16	7.4	278	283	203	17	109
6	51	1.3	3.2	3.0	4.2	11	7.4	243	221	150	18	111
7	27	.78	2.9	3.0	3.9	8.1	7.4	231	172	120	18	105
8	14	1.4	2.9	3.0	4.0	6.7	7.4	198	144	102	21	93
9	8.2	1.6	2.9	3.0	4.1	5.1	7.1	168	122	94	18	84
10	5.8	1.4	2.8	3.0	4.2	3.7	6.6	140	102	86	18	76
11	3.6	1.0	2.3	3.0	4.5	4.1	6.2	119	87	76	28	75
12	2.0	.80	2.5	3.0	6.0	3.8	5.7	104	76	68	47	77
13	1.4	1.0	2.6	3.5	6.8	3.9	41	93	72	60	137	71
14	.88	1.4	2.9	3.7	7.5	4.3	144	85	67	53	191	75
15	1.3	1.0	3.2	3.5	7.0	4.4	253	78	58	46	1130	606
16	1.4	.80	3.2	3.0	6.2	3.9	228	72	52	43	223	434
17	1.4	1.2	3.4	3.0	5.7	3.4	184	253	48	38	637	267
18	1.1	1.8	3.5	3.0	4.8	3.2	148	192	45	35	575	193
19	.61	1.8	3.3	3.0	4.4	3.0	129	156	40	32	5810	143
20	.40	1.6	2.9	3.5	3.7	2.1	151	402	38	28	2410	113
21	.25	1.4	2.9	3.2	3.8	1.6	180	10600	35	25	1380	97
22	.16	1.4	2.9	3.5	3.7	1.4	413	3590	14700	24	831	87
23	.46	2.6	2.9	3.9	3.5	1.4	1910	5020	10300	23	1840	78
24	.28	3.3	3.1	3.9	3.3	1.2	433	2870	6140	22	927	71
25	.00	2.2	2.9	3.9	4.0	.90	222	1430	3570	22	631	65
26	.01	1.7	3.1	4.2	4.0	1.1	169	974	3340	27	478	60
27	.27	.90	3.2	4.4	4.1	1.6	140	783	2860	60	339	55
28	.64	1.0	3.2	3.9	3.6	3.2	121	648	2320	41	321	2740
29	1.2	1.4	3.2	4.1	---	3.6	110	1720	1950	29	448	1340
30	3.0	1.7	3.0	4.2	---	4.3	255	972	1540	24	318	703
31	4.2	---	3.0	4.3	---	4.9	---	1640	---	21	256	---
TOTAL	181.76	52.58	91.0	105.5	127.4	136.20	5291.9	35836	50725	4167	19140	8557
MEAN	5.86	1.75	2.94	3.40	4.55	4.39	176	1156	1691	134	617	285
MAX	51	4.4	4.4	4.4	7.5	16	1910	10600	14700	1010	5810	2740
MIN	.00	.78	1.9	2.9	3.3	.90	5.0	72	35	21	17	55
AC-FT	361	104	180	209	253	270	10500	71080	100600	8270	37960	16970

CAL YR 1976 TOTAL 62388.50 MEAN 170 MAX 13700 MIN .00 AC-FT 123700
WTR YR 1977 TOTAL 124411.36 MEAN 341 MAX 14700 MIN .00 AC-FT 246800

07179400 COUNCIL GROVE LAKE NEAR COUNCIL GROVE, KS

LOCATION.--Lat 38°40'45", long 96°30'25", in NE¼NE¼ sec.10, T.16 S., R.8 E., Morris County, Hydrologic Unit 10270201, in control tower near right end of Council Grove Dam on Neosho River, 1.0 mi (1.6 km) northwest of Council Grove, and at mile 449.7 (723.6 km).

DRAINAGE AREA.--246 mi² (637 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1971 published as "Council Grove Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by compacted earthfill dam. The spillway is a limited service, uncontrolled, emergency type having a width of 500 ft (152.4 m). The outlet works consist of a cut and cover conduit 17 ft (5.2 m) in diameter. Regulated storage began October 9, 1964. Maximum pool, 265,400 acre-ft (327 hm³) at elevation 1,310.0 ft (399.29 m); top of flood control pool, 112,300 acre-ft (138 hm³) at elevation 1,289.0 ft (392.89 m); and top of conservation pool, 36,310 acre-ft (44.8 hm³) at elevation 1,270.0 ft (389.10 m). The reservoir is used for flood control, conservation, and related beneficial water uses. Figures given herein represent total contents.

COOPERATION.--Records furnished by Corps of Engineers; reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,284.64 ft (391.558 m) June 26, 1977, contents, 90,530 acre-ft (112 hm³); minimum since conservation pool first filled, 1,265.79 ft (385.813 m) Mar. 30, 1967, contents, 27,300 acre-ft (33.7 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,284.64 ft (391.558 m) June 26, contents, 90,530 acre-ft (112 hm³); minimum, 1,269.80 ft (387.035 m) Mar. 25, contents, 35,750 acre-ft (44.1 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on a survey made in 1977 by Corps of Engineers)

1,265	23,380	1,280	70,340
1,270	36,310	1,285	92,210
1,275	51,820		

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1271.65	1271.06	1270.65	1270.39	1270.25	1270.03	1270.00	1270.11	1278.24	1278.74	1270.02	1271.66
2	1271.62	1271.07	1270.65	1270.39	1270.24	1270.09	1270.03	1270.12	1277.87	1278.05	1270.01	1271.80
3	1271.58	1271.05	1270.65	1270.39	1270.24	1270.10	1270.05	1270.13	1277.48	1277.29	1270.00	1271.84
4	1271.60	1271.02	1270.65	1270.39	1270.23	1270.10	1270.04	1270.11	1277.09	1276.44	1270.08	1271.87
5	1271.57	1270.96	1270.63	1270.39	1270.23	1270.06	1270.01	1270.12	1276.68	1275.59	1270.10	1271.88
6	1271.52	1270.97	1270.64	1270.39	1270.23	1270.06	1270.00	1270.11	1276.24	1274.71	1270.11	1271.89
7	1271.51	1270.96	1270.62	1270.39	1270.22	1270.05	1270.00	1270.09	1275.80	1274.43	1270.09	1271.89
8	1271.49	1270.93	1270.60	1270.37	1270.21	1270.04	1270.00	1270.09	1275.35	1274.77	1270.08	1271.89
9	1271.45	1270.90	1270.59	1270.37	1270.21	1270.03	1269.96	1270.07	1275.07	1274.45	1270.09	1271.90
10	1271.43	1270.90	1270.60	1270.37	1270.21	1270.03	1269.94	1270.05	1274.96	1273.90	1270.08	1271.89
11	1271.39	1270.89	1270.57	1270.37	1270.21	1270.03	1269.92	1270.02	1274.88	1273.50	1270.10	1271.85
12	1271.38	1270.85	1270.56	1270.33	1270.21	1270.05	1269.92	1270.00	1274.83	1273.00	1270.09	1271.89
13	1271.37	1270.84	1270.56	1270.34	1270.20	1270.03	1269.94	1269.97	1274.76	1272.46	1270.05	1271.93
14	1271.33	1270.82	1270.55	1270.34	1270.20	1270.01	1269.92	1269.94	1274.67	1271.90	1270.05	1271.92
15	1271.29	1270.77	1270.55	1270.32	1270.20	1270.01	1269.91	1269.93	1274.49	1271.44	1270.02	1271.84
16	1271.25	1270.77	1270.55	1270.32	1270.20	1269.98	1269.92	1269.97	1274.17	1271.09	1270.07	1271.67
17	1271.20	1270.77	1270.55	1270.30	1270.17	1269.99	1269.92	1269.98	1274.02	1270.73	1270.05	1271.50
18	1271.17	1270.77	1270.54	1270.30	1270.18	1269.96	1269.96	1269.96	1275.65	1270.35	1270.02	1271.36
19	1271.15	1270.76	1270.55	1270.29	1270.16	1269.94	1269.97	1271.45	1277.82	1270.06	1270.01	1271.17
20	1271.11	1270.76	1270.51	1270.29	1270.16	1269.92	1270.00	1272.35	1278.09	1270.04	1269.98	1271.03
21	1271.10	1270.74	1270.48	1270.29	1270.13	1269.90	1270.05	1274.67	1278.76	1270.02	1269.97	1271.00
22	1271.05	1270.73	1270.48	1270.30	1270.15	1269.86	1270.06	1274.80	1279.38	1270.02	1270.05	1271.00
23	1271.08	1270.72	1270.47	1270.30	1270.15	1269.85	1270.07	1274.84	1281.16	1270.02	1270.26	1271.00
24	1271.07	1270.72	1270.46	1270.30	1270.14	1269.82	1270.05	1274.85	1283.47	1270.02	1270.29	1270.98
25	1271.02	1270.70	1270.46	1270.30	1270.13	1269.82	1270.03	1274.78	1284.56	1270.02	1270.27	1270.97
26	1271.06	1270.78	1270.45	1270.30	1270.11	1269.82	1270.02	1274.70	1284.56	1270.02	1270.27	1270.94
27	1271.05	1270.70	1270.44	1270.29	1270.09	1269.83	1269.99	1274.64	1283.86	1270.02	1270.30	1270.93
28	1271.05	1270.69	1270.43	1270.28	1270.08	1270.07	1269.99	1274.59	1282.75	1270.02	1270.40	1270.91
29	1271.05	1270.67	1270.42	1270.27	---	1270.07	1269.98	1274.55	1281.36	1270.01	1270.44	1270.91
30	1271.09	1270.66	1270.41	1270.25	---	1270.05	1270.08	1277.90	1279.95	1270.05	1270.44	1270.91
31	1271.09	---	1270.39	1270.25	---	1270.02	---	1278.35	---	1270.02	1270.54	---
MEAN	1271.28	1270.83	1270.54	1270.33	1270.18	1269.99	1269.99	1272.04	1277.93	1272.36	1270.14	1271.47
MAX	1271.65	1271.07	1270.65	1270.39	1270.25	1270.10	1270.08	1278.35	1284.56	1278.74	1270.54	1271.93
MIN	1271.02	1270.66	1270.39	1270.25	1270.08	1269.82	1269.91	1269.93	1274.02	1270.01	1269.97	1270.91
(+)	39,480	38,210	37,430	37,020	36,540	36,370	36,540	63,860	70,140	36,370	37,860	38,940
(♦)	-1,700	-1,270	-780	-410	-480	-170	+170	+27,320	+6,280	-33,770	+1,490	+1,080

CAL YR 1976 .... (♦) +2,520
WTR YR 1977 .... (♦) -2,240

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
♦ CHANGE IN CONTENTS, IN ACRE-FEET.

07179600 NEOSHO RIVER AT COUNCIL GROVE, KS

LOCATION.--Lat 38°39'54", long 96°29'38", in NE¼NW¼ sec.14, T.16 S., R.8 E., Morris County, Hydrologic Unit 11070201, on downstream side of center pier of highway bridge at city water plant in north part of Council Grove, 300 ft (91 m) downstream from Mozler Creek, 1.0 mi (1.6 km) upstream from Elm Creek, 1.7 mi (2.7 km) downstream from Council Grove Lake, and at mile 448.0 (721 km).

DRAINAGE AREA.--250 mi² (650 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1341: 1939-40(M), 1942.

GAGE.--Water-stage recorder. Datum of gage is 1,205.63 ft (367.476 m) above mean sea level (levels by Corps of Engineers). Prior to June 7, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow completely regulated by Council Grove Lake since 1964 (see sta 07179400).

AVERAGE DISCHARGE.--39 years, 125 ft³/s (3.540 m³/s), 90,560 acre-ft/yr (112 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 121,000 ft³/s (3,430 m³/s) July 11, 1951, gage height, 35.5 ft (10.82 m); 36.29 ft (11.061 m), top of surge in gage house; 37.97 ft (11.573 m), floodmark at water plant and in wire-weight gage box at upstream side of bridge, from rating curve extended above 36,000 ft³/s (1,020 m³/s), on basis of slope-area measurement of peak flow; maximum discharge since closure of Council Grove Dam in 1964, 6,600 ft³/s (187 m³/s) June 26, 1969; no flow at times in 1938-41, 1947-48, 1954-57, 1963-64, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, that of July 11, 1951. Flood in 1903 reached a stage of 37.3 ft (11.37 m) at water plant, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,360 ft³/s (95.2 m³/s) June 30, gage height, 14.27 ft (4.350 m); minimum, 3.1 ft³/s (0.088 m³/s) Nov. 23, 24, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	15	4.2	9.1	9.9	11	13	14	504	2890	12	19
2	18	15	9.1	9.4	9.9	12	14	11	942	1730	12	12
3	19	16	9.1	9.4	10	12	13	11	939	1700	12	12
4	20	16	9.1	9.4	10	11	11	11	936	1690	13	12
5	19	16	9.1	9.4	9.8	11	11	11	931	1670	12	12
6	19	20	9.4	9.7	9.7	11	11	11	926	1660	13	12
7	18	20	9.1	9.7	9.8	11	11	11	922	1200	12	13
8	18	20	9.1	9.7	9.8	11	11	11	918	279	12	13
9	18	22	9.1	9.7	10	11	11	10	596	843	12	13
10	18	15	8.8	9.7	11	12	12	10	217	1050	13	12
11	18	11	9.1	9.8	12	12	12	10	215	1050	13	12
12	21	11	8.8	9.8	12	12	12	10	215	1050	13	12
13	22	9.7	8.8	9.8	11	12	12	10	215	1040	13	13
14	22	10	8.8	10	11	12	12	10	215	1030	13	12
15	24	9.4	8.8	10	11	12	12	11	331	846	13	148
16	24	8.3	8.8	10	11	12	12	14	613	621	12	315
17	25	5.3	8.8	10	11	12	12	14	296	618	12	313
18	24	3.8	8.8	10	11	12	13	16	48	616	12	313
19	23	3.6	8.8	10	12	12	13	67	34	475	12	313
20	22	3.6	8.8	10	11	12	13	25	29	73	12	233
21	19	3.5	8.8	9.9	12	13	13	63	41	16	12	19
22	20	3.3	9.1	9.9	12	13	12	14	32	15	12	20
23	20	3.1	8.8	9.7	12	13	11	12	37	15	13	20
24	20	3.1	9.1	9.7	12	13	11	116	360	13	12	21
25	21	3.1	9.1	9.7	12	13	11	227	179	13	12	21
26	20	3.2	9.1	9.7	12	13	11	227	506	13	12	21
27	13	3.2	9.1	9.9	11	13	11	227	1910	13	14	21
28	16	3.2	9.1	9.7	11	16	11	229	2990	12	13	22
29	16	3.2	9.1	9.8	---	13	10	228	3330	12	12	22
30	16	3.2	8.8	9.8	---	13	12	398	3300	13	12	22
31	15	---	9.1	9.8	---	13	---	220	---	13	12	---
TOTAL	606	282.8	273.6	302.2	306.9	379	354	2259	22727	22279	384	2023
MEAN	19.5	9.43	8.83	9.75	11.0	12.2	11.8	72.9	758	719	12.4	67.4
MAX	25	22	9.4	10	12	16	14	398	3330	2890	14	315
MIN	13	3.1	4.2	9.1	9.7	11	10	10	29	12	12	12
AC-FT	1200	561	543	599	609	752	702	4480	45080	44190	762	4010

CAL YR 1976 TOTAL 15653.23 MEAN 42.8 MAX 763 MIN .29 AC-FT 31050
WTR YR 1977 TOTAL 52176.50 MEAN 143 MAX 3330 MIN 3.1 AC-FT 103500

07179730 NEOSHO RIVER NEAR AMERICUS, KS

LOCATION.--Lat 38°28'01", long 96°15'01", in SW¼NW¼SE¼ sec.24, T.18 S., R.10 E., Lyon County, Hydrologic Unit 11070201, near right bank, 0.1 mi (0.16 km) below Ruggles Dam, 2.0 mi (3.2 km) south of Americus, 12.5 mi (20.1 km) upstream from Allen Creek, and 24.0 mi (38.6 km) upstream from Cottonwood River.

DRAINAGE AREA.--622 mi² (1,610 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,106.99 ft (337.411 m) above mean sea level (levels by Corps of Engineers). Prior to Aug. 8, 1963, water-stage recorder at site 0.4 mi (0.6 km) upstream at present datum.

REMARKS.--Records fair. Flow moderately regulated since 1964 by Council Grove Lake (see sta 07179400). Low flow occasionally regulated by Ruggles Dam 0.1 mi (0.16 km) upstream.

AVERAGE DISCHARGE.--14 years, 319 ft³/s (9.034 m³/s), 231,100 acre-ft/yr (285 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s (309 m³/s) June 27, 1969, gage height, 28.30 ft (8.626 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharge above regulated base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 22	0400	4,660	132	21.72	6.620	June 22	2000	7,460	211	25.52	7.778
May 31	1700	6,750	191	24.86	7.577	June 25	2400	* 9,590	272	27.31	8.324

Minimum discharge, 5.0 ft³/s (0.142 m³/s) Nov. 30, Dec. 1, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	22	5.1	10	13	13	17	1040	1680	2960	63	1540
2	19	20	8.5	11	13	14	18	442	966	2380	52	1310
3	19	18	19	12	13	15	17	119	1060	1980	48	394
4	20	18	18	14	14	15	20	81	979	1780	136	427
5	24	19	17	13	15	17	17	63	930	1730	185	467
6	22	19	10	14	15	15	15	52	893	1710	135	313
7	21	19	5.7	13	15	14	14	42	873	1700	84	209
8	20	19	5.7	13	15	14	13	36	856	1750	67	170
9	20	19	5.7	11	15	14	12	31	853	800	65	143
10	20	19	5.8	11	17	14	12	28	514	1060	58	118
11	20	19	5.9	10	18	20	12	25	321	1120	70	104
12	20	19	6.2	10	19	17	12	22	309	1220	68	101
13	20	19	8.0	11	18	17	15	21	325	1090	58	158
14	19	19	10	13	17	15	16	20	311	1060	56	235
15	20	19	11	15	16	14	15	18	309	1040	187	154
16	19	20	9.4	14	15	13	15	24	441	849	85	233
17	19	20	9.9	13	16	14	14	301	619	704	61	366
18	20	19	10	13	16	16	16	131	494	681	52	328
19	21	16	11	12	16	13	15	111	2670	669	46	305
20	21	12	11	13	15	12	16	2010	2420	439	46	249
21	21	8.8	10	14	15	12	19	2870	1330	170	45	243
22	22	6.9	10	14	15	12	25	2790	5880	134	44	110
23	22	6.4	11	16	19	12	38	1980	2670	224	453	93
24	20	6.1	11	15	16	12	27	721	2150	118	280	97
25	20	5.8	11	15	15	12	19	408	4950	86	83	85
26	21	6.1	11	15	15	12	16	409	5060	235	62	81
27	23	5.7	11	15	14	13	15	383	1730	528	58	73
28	22	5.4	12	16	14	55	14	1420	2290	160	1080	73
29	22	5.2	12	14	---	46	13	967	2770	85	669	79
30	23	5.0	11	13	---	35	33	1390	3010	73	228	96
31	22	---	9.7	13	---	20	---	5560	---	75	148	---
TOTAL	640	435.4	313.4	406	434	537	520	23515	49663	28610	4772	8404
MEAN	20.6	14.5	10.1	13.1	15.5	17.3	17.3	759	1655	923	154	280
MAX	24	22	19	16	19	55	38	5560	5880	2960	1080	1540
MIN	18	5.0	5.1	10	13	12	12	18	309	73	44	73
AC-FT	1270	864	622	805	861	1070	1030	46640	98510	56750	9470	16670

CAL YR 1976 TOTAL 37670.0 MEAN 103 MAX 3300 MIN 5.0 AC-FT 74720
WTR YR 1977 TOTAL 118249.8 MEAN 324 MAX 5880 MIN 5.0 AC-FT 234500

07179794 MARION LAKE NEAR MARION, KS

LOCATION.--Lat 38°22'20", long 97°04'55", in NE¼ sec.27, T.19 S., R.3 E., Marion County, Hydrologic Unit 11070202, on top of dam on Cottonwood River, 3.0 mi (4.8 km) northwest of Marion, and at mile 126.7 (203.9 km).

DRAINAGE AREA.--200 mi² (518 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--February 1968 to current year. Prior to October 1971 published as "Marion Reservoir".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by compacted earthfill dam. Regulated storage began Feb. 26, 1968. Total capacity, 186,500 acre-ft (230 hm³) consisting of the following: Dead storage, 363 acre-ft (0.448 hm³) below elevation 1,320.0 ft (402.34 m); conservation, 83,330 acre-ft (103 hm³) between elevations 1,320.0 ft (402.34 m) and 1,350.5 ft (411.63 m); flood control, 60,210 acre-ft (74.2 hm³) between elevations 1,350.5 ft (411.63 m) and 1,358.5 ft (414.07 m); uncontrolled storage, 42,600 acre-ft (52.5 hm³) between elevations 1,358.5 ft (414.07 m) and 1,362.8 ft (415.38 m). Reservoir is used for flood control, water quality control, water supply, recreation, and fish and wildlife conservation. Figures given herein represent total contents.

COOPERATION.--Records furnished by Corps of Engineers; reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,356.66 ft (413.510 m) Oct. 13, 1973, contents, 130,600 acre-ft (161 hm³); minimum since first filled, 1,347.60 ft (410.748 m) Aug. 27, 1977, contents, 66,920 acre-ft (82.5 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,353.46 ft (412.535 m) July 3, 4, contents, 103,400 acre-ft (127 hm³); minimum, 1,347.60 ft (410.748 m) Aug. 27, contents, 66,920 acre-ft (82.5 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey made in 1977 by Corps of Engineers)

1,345	53,730
1,350	80,640
1,355	114,700

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1349.62	1349.18	1348.91	1348.83	1348.90	1348.80	1348.65	1348.92	1351.02	1351.84	1348.11	1348.06
2	1349.41	1349.15	1348.89	1348.82	1348.90	1348.81	1348.70	1348.91	1351.01	1353.17	1348.18	1348.15
3	1349.35	1349.13	1348.91	1348.82	1348.90	1348.89	1348.78	1348.89	1350.91	1353.46	1348.19	1348.17
4	1349.35	1349.02	1348.89	1348.83	1348.91	1348.85	1348.80	1348.88	1350.87	1353.45	1348.32	1348.19
5	1349.34	1349.06	1348.89	1348.82	1348.91	1348.85	1348.73	1348.89	1350.82	1353.31	1348.44	A
6	1349.29	1349.03	1348.91	1348.87	1348.93	1348.85	1348.72	1348.88	1350.74	1352.88	1348.27	|
7	1349.31	1349.05	1348.94	1348.89	1348.92	1348.86	1348.72	1348.90	1350.67	1352.57	1347.89	|
8	1349.30	1349.02	1348.88	1348.89	1348.92	1348.83	1348.70	1348.92	1350.61	1352.18	1347.72	A
9	1349.29	1349.05	1348.83	1348.89	1348.90	1348.82	1348.67	1348.88	1350.60	1351.73	1347.64	1347.81
10	1349.29	1349.03	1348.89	1348.89	1348.92	1348.77	1348.64	1348.86	1350.58	1351.20	1347.64	1347.78
11	1349.26	1349.03	1348.88	1348.88	1348.91	1348.81	1348.64	1348.85	1350.62	1350.68	1347.67	1347.73
12	1349.27	1349.02	1348.87	1348.86	1348.93	1348.87	1348.65	1348.83	1350.62	1349.89	1347.67	1347.88
13	1349.25	1349.01	1348.86	1348.88	1348.94	1348.83	1348.67	1348.80	1350.84	1349.26	1347.66	1348.02
14	1349.24	1349.00	1348.86	1348.89	1348.93	1348.82	1348.68	1348.77	1350.90	1348.71	1347.70	1348.01
15	1349.21	1349.00	1348.86	1348.90	1348.91	1348.71	1348.69	1348.78	1350.89	A	1347.70	1347.97
16	1349.17	1348.99	1348.86	1348.88	1348.91	1348.65	1348.75	1348.82	1350.83	|	1347.78	1347.98
17	1349.12	1348.98	1348.86	1348.90	1348.91	1348.70	1348.75	1349.62	1350.97	A	1347.78	1347.95
18	1349.11	1348.98	1348.86	1348.88	1348.94	1348.66	1348.77	1349.65	1350.97	1348.30	1347.76	1347.99
19	1349.11	1348.97	1348.87	1348.88	1348.90	1348.65	1348.79	1349.71	1351.85	1348.26	1347.76	1347.95
20	1349.10	1348.99	1348.88	1348.86	1348.89	1348.70	1348.87	1349.80	1351.92	1348.23	1347.74	1347.87
21	1349.09	1348.96	1348.84	1348.89	1348.86	1348.62	1348.85	1350.47	1352.07	1348.19	1347.76	1347.93
22	1349.07	1348.92	1348.84	1348.87	1348.90	1348.59	1348.86	1350.62	1352.40	1348.17	1347.70	1347.85
23	1349.13	1348.95	1348.84	1348.89	1348.93	1348.57	1348.86	1350.64	1352.49	1348.14	1347.73	1347.90
24	1349.07	1348.93	1348.84	1348.91	1348.88	1348.51	1348.86	1350.64	1352.56	1348.12	1347.72	1347.88
25	1349.05	1348.93	1348.84	1348.91	1348.88	1348.51	1348.96	1350.63	1352.82	1348.05	1347.68	1347.88
26	1349.06	1348.97	1348.84	1348.90	1348.86	1348.53	1348.84	1350.62	1352.85	1348.00	1347.67	1347.86
27	1349.09	1348.96	1348.84	1348.91	1348.85	1348.56	1348.85	1350.61	1352.70	1348.02	1347.65	1347.85
28	1349.07	1348.95	1348.87	1348.91	1348.86	1348.78	1348.85	1350.73	1352.68	1348.03	1347.68	1347.88
29	1349.12	1348.93	1348.82	1348.91	---	1348.73	1348.84	1350.83	1352.29	1348.04	1347.70	1347.88
30	1349.19	1348.90	1348.85	1348.90	---	1348.75	1348.96	1350.91	1351.98	1348.06	1347.68	1347.93
31	1349.19	---	1348.83	1348.90	---	1348.67	---	1351.03	---	1348.07	1347.80	---
MEAN	1349.20	1349.00	1348.87	1348.88	1348.90	1348.73	1348.77	1349.62	1351.43	---	1347.82	---
MAX	1349.62	1349.18	1348.94	1348.91	1348.94	1348.89	1348.96	1351.03	1352.85	1353.46	1348.44	1348.19
MIN	1349.05	1348.90	1348.82	1348.82	1348.85	1348.51	1348.64	1348.77	1350.58	1348.00	1347.64	1347.73
(+)	75,840	74,150	73,740	74,150	73,910	72,820	74,500	87,040	93,210	69,470	68,000	68,710
(‡)	-1,360	-1,690	-410	+410	-240	-1,090	+1,680	+12,540	+6,170	-23,740	-1,470	+710

CAL YR 1976 .... (‡) -6,610
WTR YR 1977 .... (‡) -8,490

+ CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.
A NO GAGE-HEIGHT RECORD.

07179795 COTTONWOOD RIVER BELOW MARION LAKE, KS

LOCATION.--Lat 38°22'00", long 97°05'00", in SE¼ sec.27, T.19 S., R.3 E., Marion County, Hydrologic Unit 11070202, on left bank, 0.25 mi (0.40 km) below outlet of dam, 1.6 mi (2.6 km) upstream from South Fork Cottonwood River, 3.0 mi (4.8 km) northwest of Marion, and at mile 126.5 (203.5 km).

DRAINAGE AREA.--200 mi² (520 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,296.57 ft (395.195 m) above mean sea level. Prior to Oct. 1, 1972, published as "below Marion Reservoir".

REMARKS.--Records good except those for winter periods, which are poor. Flow completely regulated by Marion Lake 0.25 mi (0.40 km) upstream (see sta 07179794).

AVERAGE DISCHARGE.--9 years, 87.5 ft³/s (2.478 m³/s), 63,390 acre-ft/yr (78.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,390 ft³/s (96.0 m³/s) June 13, 1971; no flow part of day June 15, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,290 ft³/s (64.9 m³/s) July 11, gage height, 12.73 ft (3.880 m); minimum, 1.2 ft³/s (0.034 m³/s) Mar. 1.

REVISIONS.--Revised figures of discharge for the water year 1976, superseding those published in the report for 1976, are given herein.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	6.3	5.9	2.9	1.8	1.3	2.8	4.1	117	775	6.7	8.3
2	6.0	8.4	5.8	3.0	1.8	1.4	3.0	3.8	196	330	7.2	36
3	6.3	10	6.0	6.1	1.8	1.4	3.0	3.7	189	6.3	7.2	86
4	7.0	9.7	6.0	2.8	1.9	1.6	3.5	3.7	183	105	8.3	86
5	7.0	8.4	5.9	2.2	1.9	1.6	3.6	3.7	186	614	64	85
6	6.3	7.9	6.3	1.9	1.8	1.5	4.5	3.6	186	1510	123	85
7	6.3	7.5	6.3	1.7	1.8	1.4	3.6	3.6	185	1620	132	85
8	6.3	7.5	5.8	1.7	1.9	1.6	3.7	3.7	88	1630	81	86
9	6.0	6.6	6.1	1.7	2.0	1.5	3.8	3.7	6.5	1600	5.8	41
10	6.0	7.0	5.3	1.8	1.8	1.5	4.1	3.6	6.7	1570	6.0	5.8
11	6.3	8.8	5.0	1.9	1.9	1.4	3.7	3.6	6.4	1930	6.5	6.0
12	6.3	8.8	5.1	1.8	1.7	1.5	3.7	3.5	5.8	2220	5.8	6.3
13	7.0	8.8	5.1	1.9	1.7	1.5	3.8	3.5	7.8	2150	5.8	6.7
14	8.6	8.4	5.0	1.9	1.7	1.5	4.9	3.6	6.3	1640	6.4	6.3
15	8.6	7.9	4.5	1.9	1.7	1.7	5.3	3.6	41	445	5.6	6.4
16	7.4	9.2	4.3	1.8	1.7	2.5	4.0	3.8	105	82	5.5	6.3
17	7.4	9.2	4.0	1.9	1.6	2.4	4.0	3.6	90	82	6.1	6.3
18	7.9	9.2	4.0	1.8	1.7	2.2	4.3	3.6	106	83	5.6	6.4
19	7.9	8.6	3.9	1.8	1.7	2.5	4.3	3.9	110	81	5.5	6.5
20	9.2	8.8	3.6	1.9	1.7	2.4	4.4	4.2	111	81	5.5	5.6
21	9.2	8.4	3.6	1.9	1.7	2.4	5.1	5.1	75	81	5.5	7.1
22	8.8	7.0	3.8	1.9	1.8	2.4	4.4	3.7	8.4	81	5.6	6.5
23	8.8	7.7	3.9	1.8	1.8	2.3	4.0	3.7	6.8	82	5.8	6.7
24	8.4	8.1	3.7	1.8	1.6	2.3	4.1	21	6.3	83	5.6	7.0
25	7.9	7.8	3.6	1.8	1.4	2.5	4.4	35	6.3	41	5.7	7.6
26	7.5	8.0	3.6	1.8	1.4	2.6	4.6	35	201	5.5	5.9	7.8
27	7.5	7.3	3.5	1.9	1.4	2.7	4.7	35	581	6.3	5.5	7.7
28	7.0	6.3	3.5	1.8	1.5	3.1	4.9	34	792	6.3	5.9	8.0
29	7.0	6.4	3.2	1.8	---	2.7	4.9	33	789	6.5	6.5	8.2
30	7.0	6.6	3.0	1.8	---	2.8	5.5	33	781	6.5	6.7	7.9
31	7.0	---	2.8	1.9	---	2.8	---	33	---	6.5	7.1	---
TOTAL	224.6	240.8	142.1	64.4	48.2	63.0	123.6	345.6	5179.3	18859.9	565.3	742.4
MEAN	7.25	8.03	4.58	2.08	1.72	2.03	4.12	11.1	173	608	18.2	24.7
MAX	9.2	10	6.3	6.1	2.0	3.1	5.5	35	792	2220	132	86
MIN	5.7	6.3	2.8	1.7	1.4	1.3	2.8	3.5	5.8	5.5	5.5	5.8
AC-FT	446	478	282	128	96	125	245	685	10270	37410	1120	1470

CAL YR 1976 TOTAL 21428.4 MEAN 58.5 MAX 1270 MIN 1.8 AC-FT 42500
WTR YR 1977 TOTAL 26599.4 MEAN 72.9 MAX 2220 MIN 1.3 AC-FT 52760

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07179795 COTTONWOOD RIVER BELOW MARION LAKE, KS--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.8	3.8	2.0	5.2	2.3	7.1	1270	412	6.0	6.6	7.5
2	6.0	6.6	3.8	2.0	5.1	3.3	7.6	1270	653	5.7	7.0	7.5
3	6.0	6.3	3.7	2.0	5.0	2.9	7.0	1270	650	9.2	7.0	7.5
4	6.0	6.4	3.7	2.0	4.3	3.2	7.0	1260	328	6.0	6.5	7.5
5	5.7	6.6	3.7	2.0	3.2	3.1	7.4	1250	75	6.1	6.7	7.5
6	5.8	7.1	3.7	2.0	1.8	3.0	7.9	490	75	5.7	6.5	7.5
7	6.1	7.2	3.6	2.0	2.2	3.1	8.1	640	76	5.2	6.5	7.6
8	6.3	7.4	3.6	2.0	2.4	3.0	7.7	1260	77	5.2	6.5	7.5
9	6.3	7.5	3.6	2.0	2.6	3.1	8.0	1250	41	108	7.0	7.0
10	6.3	7.8	3.4	2.0	2.8	3.2	8.1	1040	8.7	180	6.9	6.6
11	6.3	7.6	3.6	2.5	2.7	3.3	8.1	662	9.1	175	6.6	7.0
12	6.4	7.8	3.6	2.5	2.3	5.0	8.1	299	9.4	172	6.6	6.6
13	6.4	7.8	4.2	2.5	2.1	3.5	8.6	75	9.4	172	6.9	6.3
14	6.0	7.0	4.9	2.5	2.1	3.5	9.1	52	9.0	171	6.7	6.3
15	6.4	7.0	4.6	3.0	2.2	4.5	8.9	10	8.4	89	6.4	6.3
16	6.3	6.7	4.3	3.0	2.7	5.7	9.1	18	8.2	6.6	6.3	6.0
17	6.5	6.6	4.0	3.0	2.7	6.2	9.0	18	8.0	6.5	7.2	6.3
18	6.3	6.5	3.8	3.5	2.7	6.3	8.8	18	7.5	6.8	7.2	6.6
19	6.3	5.7	3.6	3.5	2.7	6.3	9.0	13	7.5	6.8	7.0	6.3
20	6.0	8.9	3.5	4.0	2.7	6.1	12	8.7	7.4	7.1	7.5	7.0
21	5.8	7.0	3.3	4.0	5.1	6.0	9.0	8.9	7.3	7.2	6.8	7.0
22	5.7	6.0	3.2	4.5	2.5	5.9	8.8	9.2	7.2	7.2	6.9	6.6
23	5.8	5.0	3.1	4.5	2.5	6.4	294	8.8	7.2	7.2	7.3	7.0
24	5.7	4.6	3.1	5.0	2.4	6.4	629	8.8	7.2	7.1	7.4	6.6
25	5.7	4.0	2.8	5.0	2.0	6.5	625	8.8	7.2	7.0	7.4	6.6
26	5.7	4.3	2.8	5.0	2.0	7.1	622	9.0	7.3	7.2	6.8	6.6
27	5.7	4.0	2.8	5.2	2.1	6.4	551	8.8	7.1	7.2	7.1	6.6
28	5.9	4.0	2.5	5.2	2.3	6.5	8.0	86	7.0	7.0	7.6	5.7
29	6.0	3.9	2.3	5.2	2.3	6.5	8.5	154	7.0	7.1	7.5	5.7
30	5.9	3.9	2.3	4.9	---	7.4	613	154	7.0	7.0	7.5	6.0
31	6.0	---	2.0	5.0	---	6.9	---	152	---	6.6	7.5	---
TOTAL	187.3	186.2	106.9	103.5	82.7	152.6	3494.9	12740.0	2551.1	1227.7	215.4	202.8
MEAN	6.04	6.21	3.45	3.34	2.85	4.92	116	413	85.0	39.6	6.95	6.76
MAX	6.5	8.9	4.9	5.2	5.2	7.4	629	1270	653	180	7.6	7.6
MIN	5.7	3.9	2.0	2.0	1.8	2.3	7.0	8.7	7.0	5.2	6.3	5.7
AC-FT	372	369	212	205	164	303	6930	25370	5060	2440	427	402

CAL YR 1975 TOTAL 18837.5 MEAN 51.6 MAX 1270 MIN 2.0 AC-FT 37360
WTR YR 1976 TOTAL 21301.1 MEAN 58.2 MAX 1270 MIN 1.8 AC-FT 42250

07180400 COTTONWOOD RIVER NEAR FLORENCE, KS

LOCATION.--Lat 38°14'10", long 96°52'37", in NW¼SW¼ sec.10, T.21 S., R.5 E., Marion County, Hydrologic Unit 11070202, at downstream side of county highway bridge 0.4 mi (0.6 km) upstream from Martin Creek, 2.5 mi (4.0 km) east of Florence, 3.3 mi (5.3 km) downstream from Doyle Creek and at mile 102.4 (164.8 km).

DRAINAGE AREA.--754 mi² (1,950 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,231.49 ft (375.358 m) above mean sea level. Since Aug. 10, 1965, auxiliary water-stage recorder 2.8 mi (4.5 km) downstream at datum 1,219.49 ft (371.701 m) above mean sea level.

REMARKS.--Records fair. Flow moderately regulated since 1968 by Marion Lake 24 mi (39 km) upstream (see sta 07179794).

AVERAGE DISCHARGE.--16 years, 340 ft³/s (9.629 m³/s), 246,300 acre-ft/yr (304 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,000 ft³/s (1,590 m³/s) June 17, 1975, gage height, 28.03 ft (8.544 m); minimum, 5.5 ft³/s (0.16 m³/s) Oct. 11, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1872, 32.5 ft (9.91 m) July 11, 1951 from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 3,300 ft³/s (93.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	2100	5,000	142	unknown	--
June 20	0100	* 8,600	244	[a]23.2	7.07
July 3	1300	7,400	210	21.61	6.587

[a] From wire-weight gage reading by National Weather Service observer

Minimum discharge, 21 ft³/s (0.59 m³/s) Dec. 21, May 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	52	28	26	28	27	41	188	403	822	89	153
2	32	41	28	25	28	28	36	158	284	3030	83	757
3	30	35	30	27	30	40	33	72	254	6560	83	325
4	28	32	30	30	30	40	34	49	228	940	106	235
5	28	43	32	41	35	38	34	37	213	469	205	213
6	27	48	35	37	30	34	33	30	204	1390	245	197
7	28	39	30	37	28	31	31	27	198	1770	230	180
8	32	39	35	37	28	30	30	282	195	2220	217	171
9	35	43	30	28	30	29	28	63	83	1860	120	164
10	35	41	30	26	32	29	27	38	50	1700	78	98
11	32	39	27	27	37	33	27	32	46	1710	119	80
12	32	46	32	28	43	29	27	26	109	2240	305	78
13	32	50	28	37	32	30	33	24	143	2210	144	261
14	32	39	30	43	30	33	40	23	176	2150	108	692
15	28	39	30	46	27	30	39	23	85	855	467	187
16	28	41	30	39	26	28	42	24	100	266	232	141
17	26	41	30	35	27	28	52	114	2500	203	485	119
18	26	35	30	30	28	30	54	286	1700	195	206	104
19	32	30	30	32	28	29	50	128	4900	186	127	93
20	35	30	30	37	27	27	45	592	8200	182	107	86
21	37	28	25	41	26	27	44	3100	4860	179	98	83
22	35	27	30	39	27	27	46	1700	4830	208	89	76
23	37	28	28	39	32	27	46	296	1800	355	86	76
24	39	30	30	43	30	27	41	171	835	226	96	78
25	35	30	30	43	28	27	34	140	1420	187	99	71
26	35	35	30	43	28	32	30	126	836	112	65	72
27	46	35	32	41	27	35	29	114	661	131	79	70
28	50	28	35	41	28	70	27	191	888	149	118	67
29	50	27	32	37	---	96	27	826	864	108	86	117
30	61	27	30	35	---	74	30	539	843	98	81	91
31	59	---	25	28	---	52	---	1630	---	95	81	---
TOTAL	1092	1098	932	1098	830	1117	1090	11049	37908	32806	4754	5135
MEAN	35.2	36.6	30.1	35.4	29.6	36.0	36.3	356	1264	1058	153	171
MAX	61	52	35	46	43	96	54	3100	8200	6560	485	757
MIN	26	27	25	25	26	27	27	23	46	95	78	67
AC-FT	2170	2180	1850	2180	1650	2220	2160	21920	75190	65070	9430	10190

CAL YR 1976 TOTAL 86597 MEAN 237 MAX 10000 MIN 25 AC-FT 171800
WTR YR 1977 TOTAL 98909 MEAN 271 MAX 8200 MIN 23 AC-FT 196200

07180500 CEDAR CREEK NEAR CEDAR POINT, KS

LOCATION.--Lat 38°11'55", long 96°49'22", in NE¼SE¼NE¼ sec.25, T.21 S., R.5 E., Chase County, Hydrologic Unit 11070202, on upstream end of right abutment of highway bridge, 4.0 mi (6.4 km) south of Cedar Point, and at mile 9.4 (15.1 km)

DRAINAGE AREA.--110 mi² (285 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: 1944(M). WSP 1341: 1940-41, 1942(M), 1943, 1946(M).

GAGE.--Water-stage recorder. Datum of gage is 1,262.50 ft (384.810 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 28, 1944, nonrecording gage at downstream side of present bridge at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--39 years, 54.8 ft³/s (1.552 m³/s), 39,700 acre-ft/yr (49.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,400 ft³/s (1,480 m³/s) June 29, 1951, gage height, 23.70 ft (7.224 m), from rating curve extended above 7,500 ft³/s (212 m³/s) on basis of contracted-opening and flow-over-road measurement of peak discharge; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1856, that of June 29, 1951. Flood in July 1929 reached a stage of 24.63 ft (7.507 m) from floodmarks on house on left bank where flood in 1951 reached a stage of 25.7 ft (7.83 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft³/s (102 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 19	1000	* 6,200	176	16.00	4.877
June 20	0600	4,900	139	14.55	4.435

Minimum discharge, 1.6 ft³/s (0.045 m³/s) Nov. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.4	5.8	2.8	4.2	3.1	4.6	18	79	49	15	423
2	2.3	1.7	4.4	2.8	3.9	3.3	4.0	10	56	202	14	124
3	2.0	3.2	4.2	3.2	4.0	3.7	4.0	6.8	44	94	13	56
4	2.1	3.4	4.4	3.4	4.0	3.6	4.7	5.7	37	49	17	50
5	2.5	2.8	4.5	3.6	4.1	3.4	4.8	5.1	32	40	18	47
6	3.6	2.8	4.4	3.8	3.9	3.2	4.2	4.7	29	36	17	38
7	3.2	2.7	4.1	3.6	4.0	3.0	4.0	4.9	26	34	14	31
8	2.9	2.7	3.8	3.4	3.7	2.9	3.6	9.5	25	32	12	28
9	2.7	2.7	3.9	3.0	3.8	2.9	3.4	6.5	23	31	11	25
10	2.5	2.7	3.8	2.6	4.2	2.9	3.3	4.8	21	30	11	24
11	2.5	2.8	3.8	2.6	4.3	2.9	3.6	4.2	20	29	220	23
12	2.2	3.8	3.7	2.8	4.2	3.2	3.6	3.9	195	27	78	22
13	2.0	3.8	3.8	2.8	3.9	3.4	5.3	3.7	49	25	31	24
14	2.6	3.8	3.8	3.0	3.7	4.0	7.9	3.4	32	23	165	23
15	3.3	4.0	3.9	3.2	3.3	3.6	6.2	3.1	25	21	640	22
16	3.5	4.4	3.9	3.4	3.0	3.1	5.8	3.0	21	21	66	27
17	3.5	4.4	3.9	3.5	2.9	3.0	6.8	7.8	139	19	40	22
18	3.9	4.3	4.0	3.5	2.9	3.0	7.5	20	84	19	31	20
19	3.6	4.5	3.9	3.6	2.8	3.2	7.1	157	2220	17	26	18
20	3.7	4.8	3.6	3.6	2.8	3.5	6.1	221	2530	17	24	18
21	3.7	4.3	3.4	3.7	2.8	3.8	6.8	639	396	17	22	18
22	5.1	4.4	3.3	3.7	2.8	3.8	7.2	117	1240	112	21	18
23	5.4	4.4	3.2	3.8	2.8	3.4	7.1	199	253	49	20	17
24	5.3	4.5	3.3	3.8	3.4	3.4	6.5	96	168	25	19	16
25	5.2	4.9	3.3	3.9	3.9	3.3	5.4	55	117	19	18	16
26	6.7	4.8	3.4	3.8	3.6	3.5	5.1	42	95	17	17	15
27	7.7	4.9	3.4	4.2	3.2	3.5	4.8	37	77	17	15	15
28	7.2	4.7	3.4	4.5	3.2	14	4.7	38	68	17	46	15
29	7.6	4.6	3.4	4.3	---	15	4.4	205	61	17	37	27
30	6.3	6.5	3.2	4.4	---	8.6	5.8	223	55	16	22	21
31	3.9	---	3.0	4.3	---	5.7	---	257	---	15	19	---
TOTAL	121.2	115.7	117.9	108.6	99.3	132.9	158.3	2411.1	8217	1136	1739	1243
MEAN	3.91	3.86	3.80	3.50	3.55	4.29	5.28	77.8	274	36.6	56.1	41.4
MAX	7.7	6.5	5.8	4.5	4.3	15	7.9	639	2530	202	640	423
MIN	2.0	1.7	3.0	2.6	2.8	2.9	3.3	3.0	20	15	11	15
AC-FT	240	229	234	215	197	264	314	4780	16300	2250	3450	2470

CAL YR 1976 TOTAL 9942.5 MEAN 27.2 MAX 2530 MIN 1.7 AC-FT 19720
WTR YR 1977 TOTAL 15600.0 MEAN 42.7 MAX 2530 MIN 1.7 AC-FT 30940

ARKANSAS RIVER BASIN

07182250 COTTONWOOD RIVER NEAR PLYMOUTH, KS

LOCATION.--Lat 38°23'51", long 96°21'21", in NE¼NE¼SE¼ sec.13, T.19 S., R.9 E., Chase County, Hydrologic Unit 11070203, at downstream side of county highway bridge, 0.8 mi (1.3 km) downstream from Buckeye Creek, 1.5 mi (2.4 km) southwest of Plymouth, and at mile 39.2 (63.1 km).

DRAINAGE AREA.--1,740 mi² (4,510 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,109.04 ft (338.035 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are poor. Flow partially regulated by Marion Lake 87.3 mi (140.5 km) upstream since 1968 (see sta 07179794).

AVERAGE DISCHARGE.--14 years, 906 ft³/s (25.66 m³/s), 656,400 acre-ft/yr (809 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,500 ft³/s (16.30 m³/s) June 5, 1965, gage height, 35.70 ft (10.881 m); minimum, 8.7 ft³/s (0.25 m³/s) Oct. 21, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1903, 37.8 ft (11.52 m) July 11, 1951, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,900 ft³/s (139 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 21	2400	9,770	277	30.12	9.181	June 23	1100	*16,000	453	33.12	10.095
May 31	1200	7,120	202	24.85	7.574	July 3	2000	9,300	263	29.20	8.900

Minimum discharge, 32 ft³/s (0.906 m³/s) Oct. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	68	47	46	52	43	94	480	3740	1800	439	1000
2	48	69	47	46	52	44	77	440	1980	2530	417	1690
3	44	64	48	46	56	46	64	340	1050	8400	400	1580
4	41	56	49	46	56	44	63	215	873	8690	410	1030
5	50	51	51	45	54	44	58	137	732	6850	434	923
6	43	47	54	44	56	46	54	108	635	2020	497	653
7	40	46	53	44	58	46	52	93	575	1980	652	530
8	39	48	52	42	64	43	50	212	527	2630	626	444
9	39	49	54	42	62	42	48	316	492	3020	601	398
10	39	46	53	40	60	41	45	280	418	2800	553	365
11	41	45	50	35	59	45	43	127	285	2490	513	321
12	41	45	47	36	59	42	40	93	1900	2410	937	288
13	41	46	50	38	59	41	42	81	2200	2690	1010	273
14	39	49	50	38	56	40	51	71	828	2810	740	365
15	38	57	50	38	54	40	52	64	577	2740	1150	1100
16	36	58	50	40	53	40	55	62	439	1860	1790	855
17	35	56	50	40	54	39	57	2140	366	862	739	568
18	34	55	50	40	52	40	60	632	3940	562	789	428
19	34	55	51	42	50	39	66	652	5770	512	608	352
20	32	55	51	44	48	38	70	3320	8600	481	391	319
21	33	52	51	46	47	38	76	7330	10100	458	329	305
22	34	48	50	46	47	37	85	8620	12900	930	297	290
23	37	48	50	48	51	36	89	5350	15500	930	479	277
24	38	47	48	48	47	35	80	2030	12900	834	349	263
25	38	47	48	50	44	36	75	1120	8390	610	291	251
26	39	49	48	52	43	37	69	809	4760	495	281	240
27	46	50	48	54	44	38	63	902	2830	599	255	228
28	46	48	47	52	43	66	58	1810	1890	523	697	222
29	50	46	47	50	---	81	55	3360	1990	512	819	221
30	71	46	45	50	---	98	112	3370	1930	471	427	295
31	67	---	45	52	---	116	---	6420	---	446	335	---
TOTAL	1302	1546	1534	1378	1480	1461	1903	50984	109117	64865	18255	16074
MEAN	42.0	51.5	49.5	44.5	52.9	47.1	63.4	1645	3637	2092	589	536
MAX	71	69	54	54	64	116	112	8620	15500	8690	1790	1690
MIN	32	45	45	35	43	35	40	62	285	446	255	221
AC-FT	2580	3070	3040	2730	2940	2900	3770	101100	216400	128700	36210	31880

CAL YR 1976 TOTAL 158375 MEAN 433 MAX 12300 MIN 32 AC-FT 314100
WTR YR 1977 TOTAL 269899 MEAN 739 MAX 15500 MIN 32 AC-FT 535300

07182450 JOHN REDMOND RESERVOIR NEAR BURLINGTON, KS

LOCATION.--Lat 38°14'15", long 95°46'05", in SE¼SE¼NW¼ sec.9, T.21 S., R.15 E., Coffey County, Hydrologic Unit 11070204, on the dam on Neosho River, 3,300 ft (1,000 m) southwest of spillway, 3.0 mi (4.8 km) north of Burlington, and at mile 343.7 (553.0 km).

DRAINAGE AREA.--3,015 mi² (7,809 km²).

ELEVATION RECORDS

PERIOD OF RECORD.--August 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to Sept. 9, 1964, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by compacted earthfill dam. The spillway is a gate-controlled, concrete chute type structure. Filling began Sept. 7, 1963; regulated storage began Sept. 1, 1964. Maximum pool, 858,900 acre-ft (1,060 hm³) at elevation 1,074.5 ft (327.51 m); top of flood control pool, 630,200 acre-ft (777 hm³) at elevation 1,068.0 ft (325.53 m); and top of conservation pool, 46,510 acre-ft (57.3 hm³) at elevation 1,036.0 ft (315.77 m). Reservoir is designed for flood control, water quality control, recreation, fish and wildlife, and future water supply. Figures given herein represent total contents.

COOPERATION.--Records furnished by Corps of Engineers; reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,066.81 ft (325.164 m) Oct. 16, 1973, contents, 607,500 acre-ft (749 hm³); minimum since pool first filled, 1,033.80 ft (315.102 m) Aug. 10, 1977, contents, 31,740 acre-ft (39.1 hm³).

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,055.04 ft (321.576 m) June 27, contents, 300,100 acre-ft (370 hm³); minimum, 1,033.80 ft (315.102 m) Aug. 10, contents, 31,740 acre-ft (39.1 hm³).

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Corps of Engineers, computed in 1977)

1,030	13,980	1,050	209,600
1,035	39,440	1,055	299,300
1,040	80,720	1,060	408,500
1,045	137,100		

FLEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1035.86	1035.94	1036.08	1036.10	1036.30	1036.40	1036.59	1037.07	1047.08	1051.63	1033.93	1035.82
2	1035.85	1035.99	1036.10	1036.10	1036.31	1036.44	1036.62	1037.39	1046.97	1050.71	1033.90	1036.89
3	1035.88	1036.00	1036.11	1036.10	1036.31	1036.58	1036.61	1037.60	1046.28	1049.71	1033.93	1036.87
4	1035.90	1036.02	1036.11	1036.17	1036.33	1036.55	1036.70	1037.71	1045.42	1049.28	1033.86	1036.40
5	1035.96	1035.98	1036.11	1036.17	1036.32	1036.51	1036.65	1037.78	1044.53	1048.86	1033.88	1036.45
6	1035.95	1036.00	1036.15	1036.19	1036.32	1036.50	1036.64	1037.82	1043.62	1048.35	1033.84	1036.10
7	1035.96	1036.00	1036.15	1036.20	1036.31	1036.51	1036.66	1037.86	1042.70	1047.29	1033.83	1035.45
8	1035.94	1036.00	1036.13	1036.20	1036.31	1036.49	1036.63	1037.85	1041.79	1046.21	1033.83	1034.77
9	1035.94	1036.02	1036.12	1036.20	1036.33	1036.45	1036.62	1037.88	1041.18	1045.10	1033.82	1034.42
10	1035.93	1035.98	1036.14	1036.20	1036.34	1036.48	1036.61	1037.88	1040.84	1043.88	1033.81	1034.22
11	1035.90	1035.99	1036.14	1036.20	1036.35	1036.56	1036.61	1037.97	1040.51	1042.69	1033.92	1034.07
12	1035.91	1035.98	1036.13	1036.20	1036.38	1036.65	1036.59	1037.96	1040.21	1041.39	1033.91	1034.00
13	1035.92	1035.98	1036.13	1036.19	1036.40	1036.60	1036.72	1037.96	1039.93	1040.00	1033.89	1034.49
14	1035.90	1035.95	1036.14	1036.20	1036.40	1036.59	1036.73	1037.96	1039.90	1038.65	1034.05	1034.30
15	1035.88	1035.97	1036.14	1036.21	1036.40	1036.59	1036.73	1037.96	1040.17	1037.12	1034.21	1034.20
16	1035.85	1035.98	1036.14	1036.22	1036.40	1036.53	1036.77	1038.00	1040.42	1035.63	1034.28	1034.62
17	1035.80	1036.00	1036.13	1036.21	1036.44	1036.60	1036.76	1038.15	1040.55	1034.82	1034.27	1034.67
18	1035.89	1036.00	1036.13	1036.22	1036.45	1036.50	1036.82	1038.41	1040.42	1034.66	1034.01	1034.53
19	1035.86	1036.00	1036.14	1036.22	1036.42	1036.56	1036.86	1038.90	1041.40	1034.97	1033.90	1034.31
20	1035.84	1036.04	1036.14	1036.21	1036.42	1036.51	1036.88	1039.33	1044.04	1035.18	1033.90	1034.16
21	1035.83	1036.06	1036.11	1036.22	1036.41	1036.52	1036.90	1041.30	1046.50	1035.00	1033.84	1034.10
22	1035.80	1036.07	1036.11	1036.21	1036.42	1036.50	1036.92	1043.30	1048.70	1035.10	1034.08	1034.00
23	1035.87	1036.09	1036.12	1036.23	1036.50	1036.50	1036.95	1044.90	1050.95	1035.19	1034.41	1034.09
24	1035.87	1036.07	1036.12	1036.25	1036.48	1036.46	1036.96	1045.52	1052.80	1035.10	1034.70	1034.21
25	1035.80	1036.10	1036.12	1036.27	1036.47	1036.45	1036.97	1045.18	1054.08	1034.73	1034.43	1034.22
26	1035.87	1036.11	1036.12	1036.28	1036.50	1036.45	1036.99	1044.61	1054.80	1034.36	1034.20	1034.12
27	1035.81	1036.11	1036.12	1036.30	1036.50	1036.49	1036.98	1044.00	1054.93	1034.16	1034.14	1034.10
28	1035.86	1036.10	1036.12	1036.29	1036.50	1036.63	1036.98	1044.30	1054.13	1034.12	1034.64	1034.01
29	1035.85	1036.09	1036.10	1036.29	---	1036.60	1036.98	1045.37	1053.27	1034.04	1035.20	1033.99
30	1035.97	1036.09	1036.10	1036.30	---	1036.63	1037.00	1045.81	1052.49	1034.01	1034.80	1033.97
31	1035.96	---	1036.10	1036.30	---	1036.58	---	1046.32	---	1034.00	1034.30	---
MEAN	1035.88	1036.02	1036.12	1036.21	1036.39	1036.53	1036.78	1040.33	1045.69	1039.87	1034.12	1034.72
MAX	1035.97	1036.11	1036.15	1036.30	1036.50	1036.65	1037.00	1046.32	1054.93	1051.63	1035.20	1036.89
MIN	1035.80	1035.94	1036.08	1036.10	1036.30	1036.40	1036.59	1037.07	1039.90	1034.00	1033.81	1033.97
(†)	46,220	47,160	47,240	48,710	50,220	50,840	54,160	154,600	252,000	32,950	34,800	32,770
(‡)	+720	+940	+80	+1,470	+1,510	+620	+3,320	+100,440	+97,400	-219,050	+1,850	-2,030

CAL YR 1976 .... (‡) +1,450
WTR YR 1977 .... (‡) -12,730

† CONTENTS, IN ACRE-FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

07182510 NEOSHO RIVER AT BURLINGTON, KS

LOCATION.--Lat 38°11'40", long 95°44'10", in SE¼NW¼ sec.26, T.21 S., R.15 E., Coffey County, Hydrologic Unit 11070204, at downstream side of highway bridge at Burlington, 0.3 mi (0.5 km) upstream from Rock Creek, and at mile 338.4 (564.5 km). Records include flow of Rock Creek.

DRAINAGE AREA.--3,042 mi² (7,879 km²), includes that of Rock Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 983.56 ft (299.789 m) above mean sea level.

REMARKS.--Records good. Flow completely regulated by John Redmond Reservoir 5.3 mi (8.5 km) upstream since 1963 (see sta 07182460).

AVERAGE DISCHARGE.--16 years, 1,605 ft³/s (45.45 m³/s), 1,163,000 acre-ft/yr (1.43 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,200 ft³/s (742 m³/s) Sept. 13, 1961, gage height, 31.53 ft (9.610 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Sept. 16, 17, 19, 20, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,400 ft³/s (379 m³/s) July 4, gage height, 23.08 ft (7.035 m); minimum 29 ft³/s (0.821 m³/s) Dec. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	48	43	46	46	47	48	50	6850	12600	520	3020
2	51	46	42	46	46	47	49	49	7500	12900	500	3810
3	51	46	42	46	46	47	50	48	7470	12600	480	4530
4	51	46	42	47	47	46	51	47	7710	12700	460	4370
5	57	46	43	44	48	45	50	46	7350	13000	315	4400
6	51	45	43	47	48	46	49	45	6950	12000	390	4200
7	51	47	42	46	48	46	51	45	6590	11700	550	3920
8	51	47	43	45	49	45	51	45	6180	11200	500	3400
9	51	46	42	43	49	45	51	45	4860	11300	488	2220
10	51	45	42	44	50	45	51	44	2890	10800	466	1530
11	51	45	43	43	49	54	51	44	2800	10500	521	1280
12	51	45	42	44	48	47	50	44	2560	10400	547	1030
13	49	45	42	45	48	46	58	44	2470	10100	524	1840
14	48	44	42	45	45	46	44	45	2420	9790	569	1680
15	48	44	42	48	44	47	45	43	2400	9610	780	1480
16	48	44	42	46	45	46	48	45	2190	9110	1320	1910
17	48	44	42	48	45	47	48	52	1400	5520	2090	2250
18	49	44	42	46	45	47	48	45	1420	2290	1950	2120
19	49	44	42	46	44	47	48	47	1480	100	1090	1750
20	48	44	42	46	44	45	47	389	414	414	696	1370
21	46	44	44	46	45	46	49	1160	479	1920	643	1100
22	46	44	42	45	45	45	48	2160	396	1730	573	1070
23	47	44	42	45	50	46	48	3240	261	1940	1840	802
24	48	42	42	45	45	46	47	4130	319	1890	1840	795
25	46	43	42	43	44	47	44	4990	2460	2270	1930	816
26	46	44	42	42	47	48	44	4870	7440	2100	1330	802
27	47	42	44	43	45	49	45	4760	11700	1500	778	802
28	48	42	43	43	46	54	45	4740	13200	1340	1500	607
29	47	44	43	45	---	49	44	4700	13000	919	2600	568
30	50	44	44	44	---	49	47	4700	12700	610	3850	496
31	48	---	47	46	---	48	---	5500	---	551	2890	---
TOTAL	1524	1338	1320	1398	1301	1458	1449	46212	145859	205404	34530	59968
MEAN	49.2	44.6	42.6	45.1	46.5	47.0	48.3	1491	4862	6626	1114	1999
MAX	57	48	47	48	50	54	58	5500	13200	13000	3850	4530
MIN	46	42	42	42	44	45	44	43	261	100	315	496
AC-FT	3020	2650	2620	2770	2580	2890	2870	91660	289300	407400	68490	118900

CAL YR 1976 TOTAL 216802.0 MEAN 592 MAX 9530 MIN 2.5 AC-FT 430000
WTR YR 1977 TOTAL 501761.0 MEAN 1375 MAX 13200 MIN 42 AC-FT 995200

07183000 NEOSHO RIVER NEAR IOLA, KS

LOCATION.--Lat 37°53'27", long 95°25'50", in SW¼NE¼NE¼ sec.9, T.25 S., R.18 E., Allen County, Hydrologic Unit 11070204, on left bank, 1.0 mi (1.6 km) downstream from Elm Creek, 3.0 mi (4.8 km) southwest of Iola, and at mile 284.4 (457.6 km).

DRAINAGE AREA.--3,818 mi^2 (9,889 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1895 to December 1903 (published as "at Iola"), October 1917 to current year. Monthly discharge only for some periods, published in WSP 1311. Figures of daily discharge for August 1895 to January 1898, published in previous reports, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1037: 1918-24, 1926-29, 1935(M). WSP 1117: Drainage area. WSP 1311: 1895-98. WSP 1391: 1896(M), 1899, 1901-2(M), 1903-4. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 914.77 ft (278.822 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1917, nonrecording gage at tailgate of flume at milldam, 4.8 mi (7.7 km) upstream at datum 12.2 ft (3.72 m) higher.

REMARKS.--Records good. Considerable regulation since 1963 by John Redmond Reservoir 59.3 mi (95.4 km) upstream (see sta 07182450).

AVERAGE DISCHARGE.--68 years, 1,718 ft^3/s (48.65 m^3/s), 1,245,000 acre-ft/yr (1.54 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 436,000 ft^3/s (12,300 m^3/s) July 13, 1951, gage height, 43.0 ft (13.11 m), from floodmark, from rating curve extended above 84,000 ft^3/s (2,380 m^3/s) on basis of slope-area measurement of peak flow; no flow at times in 1936, 1956.

Maximum stage known since at least 1855, 43.0 ft (13.11 m) July 13, 1951, from information by local newspaper.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 10,000 ft^3/s (283 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
May 30	0700	12,100	343	14.56	4.438	June 23	1900	14,600	413	16.33	4.977
June 20	0700	*19,600	555	19.94	6.078	June 29	1500	13,400	379	15.51	4.727

Minimum discharge, 36 ft^3/s (1.02 m^3/s) Jan 1, Apr. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	58	48	38	46	49	46	183	6730	12800	538	5130
2	41	50	50	48	47	48	47	138	7440	12700	498	6560
3	41	45	49	49	48	58	44	102	7780	12900	471	4660
4	43	41	49	52	47	56	52	92	7860	12600	422	4670
5	83	42	47	52	47	55	50	84	7850	12800	306	4630
6	66	42	50	52	48	52	45	66	7490	12900	359	4770
7	57	42	47	49	48	50	44	58	7150	12200	517	4170
8	49	45	47	47	47	49	43	55	6810	12500	498	3680
9	45	46	46	48	49	48	43	102	6370	11900	474	3120
10	44	46	48	44	51	46	41	114	3980	11700	458	1680
11	45	47	48	46	53	78	39	67	2740	11000	616	1270
12	46	47	49	49	54	82	38	53	2580	10700	694	1040
13	46	44	46	51	54	70	51	47	2330	10400	642	1820
14	46	45	45	50	54	56	83	44	2230	10200	819	5890
15	44	47	44	51	51	54	142	41	2180	9770	2030	2360
16	41	47	45	48	49	48	132	48	2140	9930	1200	3320
17	41	49	44	46	49	46	83	125	1720	8470	1380	4780
18	43	48	45	46	50	49	79	92	2080	4860	2040	2590
19	50	47	46	47	51	48	105	78	12500	1620	1660	1980
20	52	49	45	46	52	46	87	334	18900	307	986	1520
21	48	47	42	47	50	49	86	2650	12900	527	753	1250
22	43	52	43	46	49	46	85	3880	9050	1630	690	1140
23	46	52	43	50	54	48	104	2680	12800	2380	5220	1040
24	51	50	46	50	55	47	94	2950	10800	1840	3010	2510
25	48	50	45	51	53	47	75	4200	3130	1620	2080	2580
26	45	54	44	50	54	48	62	4550	5320	2150	1770	1160
27	44	64	45	50	54	57	54	4440	9780	1690	1210	1470
28	44	49	46	48	54	68	50	5190	12300	1240	1390	1450
29	47	49	47	44	---	65	45	8110	13300	1130	2010	846
30	65	49	46	45	---	63	52	11000	13200	798	3070	742
31	62	---	42	47	---	53	---	6770	---	592	3630	---
TOTAL	1507	1443	1427	1489	1418	1679	2001	58343	221440	217854	41441	83828
MEAN	48.6	48.1	46.0	48.0	50.6	54.2	66.7	1882	7381	7028	1337	2794
MAX	83	64	50	52	55	82	142	11000	18900	12900	5220	6560
MIN	41	41	42	38	46	46	38	41	1720	307	306	742
AC-FT	2990	2860	2830	2950	2810	3330	3970	115700	439200	432100	82200	166300

CAL YR 1976 TOTAL 257751 MEAN 704 MAX 9600 MIN 19 AC-FT 511200
WTR YR 1977 TOTAL 633870 MEAN 1737 MAX 18900 MIN 38 AC-FT 1257000

07183500 NEOSHO RIVER NEAR PARSONS, KS

LOCATION.--Lat 37°18'39", long 95°06'37", in NW¼NE¼ sec.33, T.31 S., R.21 E., Labette County, Hydrologic Unit 11070205, on right bank 150 ft (46 m) downstream from dam of Kansas Army Ammunition Plant, 8 mi (13 km) southeast of Parsons, and at mile 201.4 (324.1 km).

DRAINAGE AREA.--4,905 mi² (12,704 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only October 1921, published in WSP 1311.

REVISED RECORDS.--WSP 807: 1922-23. WSP 1391: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 810.25 ft (246.964 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1929, nonrecording gage at bridge 2.2 mi (3.5 km) upstream at datum 0.04 ft (0.012 m) lower. Oct. 1, 1929, to Feb. 7, 1935, nonrecording gage, and Feb. 8, 1935, to Dec. 7, 1966, water-stage recorder at bridge 2.7 mi (4.3 km) upstream at present datum.

REMARKS.--Records good. Flow moderately regulated by John Redmond Reservoir 142.3 mi (229.0 km) upstream since 1963 (see sta 07182450). Small diversion by the Kansas Army Ammunition Plant.

AVERAGE DISCHARGE.--56 years, 2,558 ft³/s (72.44 m³/s), 1,853,000 acre-ft/yr (2.28 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 410,000 ft³/s (11,600 m³/s) July 14, 1951, gage height, 40.20 ft (12.25 m), from floodmark in gage well at site 2.7 mi (4.3 km) upstream; no flow at times in 1934, 1936, 1939, 1955-57.

EXTREMES FOR CURRENT YEAR.--Peak discharges above regulated base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 22	1500	*38,600	1,090	23.26	7.090
June 29	2000	16,400	436	15.19	4.630
July 9	1000	15,000	425	14.97	4.563

Minimum discharge, 21 ft³/s (0.595 m³/s) Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	53	53	49	61	68	90	158	8070	14300	733	5630
2	55	57	53	50	60	66	89	167	6840	13500	638	9280
3	52	58	51	50	61	70	82	148	7240	13500	571	7260
4	51	56	51	51	62	67	77	177	7500	13300	523	5040
5	67	52	50	52	62	67	73	157	7520	12900	508	4840
6	88	50	51	54	62	68	70	128	7500	12900	413	4800
7	143	46	52	56	61	68	69	123	7190	13000	326	4820
8	106	42	52	59	62	65	67	133	6860	12800	430	4260
9	83	41	52	57	62	63	65	362	6590	14700	522	3780
10	70	42	53	56	62	60	63	125	6150	12900	510	3220
11	60	42	53	57	63	81	62	97	4170	12100	684	2070
12	54	43	51	54	93	94	61	107	2860	11400	2830	1570
13	44	43	53	57	89	184	61	114	3420	10800	1640	3090
14	34	43	53	56	95	163	61	96	2810	10500	1160	4790
15	30	43	53	56	84	144	61	78	2370	10200	4670	7670
16	45	43	53	53	75	122	67	118	2250	9740	3610	4450
17	51	44	53	52	70	105	97	2650	2200	9740	2350	4820
18	41	46	53	54	68	98	176	914	2650	8600	1960	5730
19	41	47	53	53	66	88	156	394	9000	5300	2220	3420
20	41	47	52	53	64	80	140	926	23500	2170	1970	2400
21	41	47	50	53	62	77	138	1630	29800	737	1360	1860
22	41	48	50	53	59	71	130	6020	36600	439	943	1530
23	44	47	51	55	62	70	639	5500	36700	2350	1960	3110
24	58	47	49	57	62	69	256	3310	32400	2680	7980	6130
25	46	47	49	59	62	67	167	3370	28700	2090	4840	6630
26	43	50	49	62	62	65	139	4480	19500	1770	2480	3890
27	42	49	49	64	65	70	122	4900	8080	2100	2020	6100
28	42	47	50	61	67	71	107	7110	10600	1890	1570	3890
29	44	49	50	62	---	76	93	7350	14100	1430	4870	8590
30	52	51	50	64	---	84	83	9490	15100	1240	3990	4070
31	52	---	43	61	---	91	---	12900	---	1050	3520	---
TOTAL	1720	1420	1585	1730	1883	2632	3561	73232	358270	242126	63801	138740
MEAN	55.5	47.3	51.1	55.8	67.3	84.9	119	2362	11940	7811	2058	4625
MAX	143	58	53	64	95	184	639	12900	36700	14700	7980	9280
MIN	30	41	43	49	59	60	61	78	2200	439	326	1530
AC-FT	3410	2820	3140	3430	3730	5220	7060	145300	710600	480300	126500	275200

CAL YR 1976 TOTAL 396332 MEAN 1083 MAX 26900 MIN 30 AC-FT 786100
WTR YR 1977 TOTAL 890780 MEAN 2440 MAX 36700 MIN 30 AC-FT 1767000

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1968.
WATER TEMPERATURES: October 1963 to September 1968.

07184000 LIGHTNING CREEK NEAR MCCUNE, KS

LOCATION.--Lat 37°16'54", long 95°01'56", in NE¼NE¼ sec.7, T.32 S., R.22 E., Cherokee County, Hydrologic Unit 11070205, at downstream side of highway bridge, 5.0 mi (8.0 km) south of McCune, 13.0 mi (20.9 km) southeast of Parsons, and at mile 12.6 (20.3 km).

DRAINAGE AREA.--197 mi² (510 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to September 1946, October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 818.10 ft (249.357 m) above mean sea level (levels by Corps of Engineers). Prior to Mar. 10, 1945, nonrecording gage and Mar. 10, 1945, to Sept. 30, 1946, water-stage recorder at present site and datum. Oct. 1, 1959, to May 26, 1960, water-stage recorder 100 ft (30 m) downstream at present datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--26 years, 145 ft³/s (4.106 m³/s), 105,100 acre-ft/yr (130 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,000 ft³/s (651 m³/s) May 19, 1943, gage height, 17.81 ft (5.428 m), from rating curve extended above 15,000 ft³/s (425 m³/s); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,800 ft³/s (51.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 21	0400	8,500	241	16.50	5.029
June 22	1900	* 9,570	271	16.63	5.069
June 28	1000	1,970	55.8	12.41	3.783

Minimum discharge, no flow Oct. 4, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.46	.04	.02	.77	3.1	.59	45	79	586	1.2	4.9
2	.01	.46	.04	.02	.74	3.1	.54	80	46	164	1.3	3.7
3	.01	.44	.04	.02	.74	3.2	.56	41	20	84	1.4	3.1
4	.00	.33	.04	.02	.76	3.1	.57	26	11	56	1.3	2.6
5	.10	.20	.04	.03	.77	3.1	.53	17	7.3	39	1.3	2.2
6	.12	.17	.05	.03	.74	3.1	.53	11	5.1	27	1.0	1.9
7	.15	.16	.06	.04	.66	3.0	.52	7.9	3.7	17	.90	1.9
8	.20	.15	.05	.04	.60	3.0	.49	6.9	2.8	13	.71	1.6
9	.19	.14	.05	.05	.63	2.8	.38	40	2.3	12	.58	1.4
10	.17	.14	.05	.04	.65	2.6	.21	62	1.9	11	.94	.99
11	.14	.13	.05	.06	.80	6.7	.20	29	1.5	9.0	14	1.3
12	.12	.13	.05	.04	2.6	12	.19	13	1.2	7.9	2.0	1.7
13	.11	.12	.06	.04	2.3	6.0	.17	7.7	1.1	6.6	1.4	12
14	.10	.12	.06	.04	2.3	5.7	.17	4.9	34	5.6	30	63
15	.09	.12	.06	.04	2.1	5.7	.19	3.5	46	4.5	308	228
16	.07	.13	.05	.04	2.5	4.2	.25	2.7	12	3.9	51	150
17	.05	.13	.05	.03	2.7	3.2	.29	236	5.9	3.5	115	75
18	.04	.12	.05	.03	2.6	2.5	.32	230	71	3.1	51	48
19	.03	.11	.06	.03	2.1	1.9	.32	69	1210	2.7	13	25
20	.02	.11	.06	.02	2.1	1.6	.90	280	3240	2.3	7.1	12
21	.01	.10	.05	.02	2.0	1.4	2.7	788	6760	2.1	4.7	8.7
22	.00	.10	.05	.02	2.3	1.2	3.9	244	7040	21	3.3	7.0
23	.02	.09	.05	.04	2.6	1.1	329	98	6670	3.6	8.4	6.1
24	54	.08	.05	.08	2.3	1.0	228	53	3310	2.0	9.6	188
25	10	.09	.05	.14	2.6	.78	56	32	924	1.5	5.3	671
26	3.9	.08	.05	.22	3.0	.56	17	17	1660	1.2	3.3	155
27	2.8	.06	.05	.72	3.2	.76	9.9	11	531	1.1	2.3	1070
28	2.1	.05	.05	1.5	3.1	.90	6.4	353	179	1.0	36	955
29	1.3	.04	.05	1.3	---	.71	5.1	239	515	.96	58	1230
30	.95	.03	.04	.99	---	.68	3.9	123	317	.90	16	926
31	.45	---	.03	.84	---	.61	---	113	---	1.2	7.7	---
TOTAL	77.27	4.59	1.53	6.55	50.30	89.30	669.82	3283.6	32707.8	1094.66	759.73	6053.09
MEAN	2.49	.15	.049	.21	1.80	2.88	22.3	106	1090	35.3	24.5	202
MAX	54	.46	.06	1.5	3.2	12	329	788	7040	586	308	1230
MIN	.00	.03	.03	.02	.60	.56	.17	2.7	1.1	.90	.58	.99
AC-FT	153	9.1	3.0	13	100	177	1330	6510	64880	2170	1510	12010

CAL YR 1976 TOTAL 26911.53 MEAN 73.5 MAX 6410 MIN .00 AC-FT 53380
WTR YR 1977 TOTAL 44798.24 MEAN 123 MAX 7040 MIN .00 AC-FT 88860

07184000 LIGHTNING CREEK NEAR MCCUNE, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
APR 13...	1.6	880	7.7	19.0	24	8.8	13	110	39	35

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
APR 13...	4.9	230	0	189	310	20	5.0	5.0	5.6	645

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR 13...	.88	2.87	.20	.60	.90	.16	.29	.36	.14

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR 13...	700	0	0	190	140	0	0	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR 13...	10	800	60	0	0	750	60	.0	10	10

07184000 LIGHTNING CREEK NEAR MCCUNE, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT										
20...	.02	573	7.8	6.5	10	--	5.8	16	--	--
NOV										
17...	.12	1720	6.5	5.0	7	--	1.9	42	--	--
DEC										
29...	.04	1220	7.1	2.5	15	--	1.0	--	--	.6
FEB										
16...	2.8	980	7.3	4.5	2	--	8.4	30	--	.4
MAR										
16...	4.0	1130	7.7	12.0	5	--	8.6	--	58	.2
APR										
21...	2.0	510	7.2	18.0	--	220	3.8	25	--	.2
MAY										
19...	52	315	7.1	21.0	--	180	4.6	--	--	.1
JUN										
15...	41	525	7.5	25.0	--	16	4.7	40	--	.5
JUL										
20...	2.3	840	7.4	26.5	--	22	3.6	43	--	--
AUG										
17...	156	215	6.9	24.0	--	300	6.2	--	60	.2
SEP										
21...	7.3	580	7.6	20.0	--	35	4.7	31	--	.2

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT									
20...	--	61	23	23	5.0	200	0	164	120
NOV									
17...	--	120	65	40	8.0	230	0	189	410
DEC									
29...	30	120	70	45	8.0	330	0	271	400
FEB									
16...	18	--	--	--	--	230	0	189	290
MAR									
16...	11	130	64	--	--	220	0	180	410
APR									
21...	10	46	20	19	4.0	100	0	82	160
MAY									
19...	6.0	26	6.6	17	4.8	82	0	67	50
JUN									
15...	23	55	14	29	5.7	180	0	148	120
JUL									
20...	--	80	40	30	5.0	200	0	164	280
AUG									
17...	12	20	6.6	7.0	3.3	47	0	39	60
SEP									
21...	10	68	32	25	4.5	160	0	131	200

07184000 LIGHTNING CREEK NEAR MCCUNE, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT									
20...	18	.3	.3	8.6	359	.49	.02	--	.09
NOV									
17...	10	.6	.6	8.2	782	1.06	.25	--	.05
DEC									
29...	9.0	.5	.5	13	841	1.14	.09	--	.00
FEB									
16...	14	.3	.3	7.0	--	--	--	--	.02
MAR									
16...	17	.5	.5	4.4	--	--	--	--	.02
APR									
21...	11	.6	.6	2.4	316	.43	1.71	.50	.50
MAY									
19...	25	.3	.3	7.0	183	.25	25.9	1.2	1.1
JUN									
15...	41	.2	.2	10	365	.50	40.4	.10	.10
JUL									
20...	18	.3	.3	10	564	.77	3.50	.10	.10
AUG									
17...	10	.2	.3	5.4	139	.19	58.5	.40	.40
SEP									
21...	15	.3	.3	10	436	.59	8.59	.20	.20

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT									
20...	.30	.40	.32	.44	--	--	--	--	--
NOV									
17...	.30	.20	.80	.82	--	.34	.24	--	--
DEC									
29...	.10	.00	1.2	1.1	--	.72	.15	--	.20
FEB									
16...	.10	.10	.51	.71	--	.76	.26	--	.14
MAR									
16...	.10	.10	.28	.34	--	.18	.03	--	.11
APR									
21...	--	2.2	.34	.45	.34	--	.11	.05	.15
MAY									
19...	--	4.9	--	--	.31	--	.20	.11	.34
JUN									
15...	--	.40	--	--	.24	--	.13	.06	.18
JUL									
20...	--	.40	.14	.27	.13	--	.03	.02	.06
AUG									
17...	--	1.8	.26	.52	.52	--	.08	.01	.03
SEP									
21...	--	.90	.26	.26	.14	--	.09	.02	.06

07184000 LIGHTNING CREEK NEAR MCCUNE, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUMINUM (AL) (UG/L)	DIS-SOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DIS-SOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT 20...	400	100	0	0	80	160	0	10	0	0	0
NOV 17...	0	0	0	0	290	280	0	0	0	0	0
DEC 29...	1800	1400	0	0	190	190	0	0	0	0	0
FEB 16...	100	0	0	0	270	190	0	0	0	0	0
MAR 16...	0	0	0	0	190	190	0	0	0	0	0
APR 21...	16000	0	0	0	20	30	0	0	10	0	10
MAY 19...	9600	100	0	0	120	120	0	0	0	0	0
JUN 15...	1900	0	0	--	120	140	0	0	0	0	0
JUL 20...	1000	0	--	--	120	110	0	0	0	0	0
AUG 17...	15000	300	0	--	40	40	0	0	10	0	10
SEP 21...	2200	0	0	--	110	100	0	0	0	0	0

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DIS-SOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT 20...	10	380	90	20	0	630	480	.0	--	0	0
NOV 17...	0	2200	860	0	0	5100	5000	--	--	0	0
DEC 29...	0	2400	1100	0	0	8500	8500	--	--	0	0
FEB 16...	0	900	20	0	0	2500	2500	--	--	0	0
MAR 16...	0	180	10	20	20	140	80	.0	--	0	0
APR 21...	0	6500	70	0	0	560	340	.0	.0	80	0
MAY 19...	0	4600	60	0	0	280	60	.0	--	0	0
JUN 15...	0	1200	0	0	0	780	540	--	--	0	0
JUL 20...	0	850	0	0	0	900	780	--	--	0	0
AUG 17...	0	6400	80	20	20	330	70	.0	--	50	0
SEP 21...	0	1400	20	20	20	380	290	.0	--	0	0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR 26...	1533	17	680	50	2.4
MAY 19...	1140	52	315	196	28
AUG 17...	1220	156	215	410	173
31...	1245	7.2	600	80	1.6

07184060 DEER CREEK NEAR WEST MINERAL, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
JUN 21...	.07	5250	6.7	29.0	2	8.2	10	340	260	560

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
JUN 21...	18	250	0	205	2930	17	.9	.9	1.8

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
JUN 21...	4250	5.78	.80	.09	.50	.40	.00	.13	.48

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)
JUN 21...	0	0	540	540	0	20	0	0	0	30

DATE	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
JUN 21...	60	30	40	100	130	110	.0	0	50

07184060 DEER CREEK NEAR WEST MINERAL, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
OCT												
20...	.03	4580	8.2	9.0	15	--	9.8	2	--	--	370	230
NOV												
17...	.08	4400	7.4	5.5	7	--	10.8	4	--	--	380	250
DEC												
28...	.18	4800	8.3	2.5	10	--	13.1	--	--	--	390	250
JAN												
18...	.12	4700	8.5	1.5	20	--	16.9	12	.6	28	390	260
FEB												
15...	.17	4500	7.4	6.5	6	--	14.6	11	.5	27	--	--
MAR												
16...	.10	4600	7.9	7.0	6	--	10.0	42	.4	20	380	250
APR												
21...	.77	4800	8.0	19.0	--	7.0	8.6	13	.4	20	370	240
MAY												
19...	.38	4500	8.0	22.5	--	8.0	8.7	--	.3	14	360	240
JUN												
15...	.15	4000	8.0	29.0	--	10	7.8	23	.3	17	340	240
22...	81	220	7.6	23.0	--	16	6.9	48	.1	7.4	200	130
JUL												
19...	.22	3140	7.9	32.0	--	14	7.1	22	--	--	280	180
AUG												
16...	3.3	3320	8.2	26.0	--	6.0	7.4	13	.1	5.0	290	190
SEP												
20...	.78	3490	8.1	22.5	--	5.0	7.8	1	.3	16	300	190

DATE	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
OCT												
20...	440	16	340	0	279	2500	14	.8	.8	3.7	3740	5.09
NOV												
17...	460	17	370	0	303	2600	16	.9	.9	3.3	3910	5.32
DEC												
28...	510	18	400	0	328	2700	17	.9	1.0	4.6	4090	5.56
JAN												
18...	--	--	420	0	344	2800	11	1.0	1.0	4.9	--	--
FEB												
15...	--	--	360	0	295	2400	20	.9	.9	2.8	--	--
MAR												
16...	--	--	410	0	336	2600	19	.9	.9	2.8	--	--
APR												
21...	500	15	360	0	295	2600	20	1.0	1.0	3.4	3930	5.34
MAY												
19...	500	16	290	0	238	2500	19	.9	.9	2.1	3780	5.14
JUN												
15...	465	17	230	0	189	2600	18	.9	.9	2.4	3800	5.17
22...	230	10	140	0	115	1300	11	.6	.6	3.0	1960	2.67
JUL												
19...	340	16	220	0	180	1900	18	.8	.8	2.8	2450	3.48
AUG												
16...	350	15	220	0	180	2000	18	.8	.8	4.0	2980	4.05
SEP												
20...	350	14	260	0	213	2800	18	.8	.8	5.1	3010	4.09

DATE	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	PHOSPHATE (PO4) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
OCT												
20...	.30	--	.02	.10	.10	.13	.11	--	--	--	--	--
NOV												
17...	.84	--	.00	.00	.00	.05	.09	--	.04	.00	--	--
DEC												
28...	1.99	--	.05	.10	.20	.23	.22	--	.01	.00	--	.00
JAN												
18...	--	--	.14	.30	.60	.31	.24	--	.04	.00	--	.00
FEB												
15...	--	--	.05	.10	.20	1.4	.59	--	.16	.04	--	.08
MAR												
16...	--	--	.11	.40	.50	.15	.17	--	.06	.01	--	.10
APR												
21...	8.17	.10	.10	--	.40	.24	.21	.03	--	.01	.01	.03
MAY												
19...	3.88	.10	.10	--	.40	--	--	.03	--	.00	.00	.00
JUN												
15...	1.54	.00	.00	--	.00	--	--	.04	--	.02	.01	.03
22...	429	.10	.10	--	.40	--	--	.15	--	.09	.05	.15
JUL												
19...	1.69	.00	.00	--	.00	.00	.12	.03	--	.01	.00	.00
AUG												
16...	26.6	.00	.00	--	.00	.21	.15	.02	--	.00	.00	.00
SEP												
20...	6.34	.00	.00	--	.00	.05	.08	.01	--	.02	.00	.00

07184060 DEER CREEK NEAR WEST MINERAL, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
20...	600	200	0	0	570	580	0	10	10	10	10
NOV											
17...	0	0	0	0	590	590	0	0	0	0	0
DEC											
28...	1600	1500	0	0	660	670	0	0	0	0	10
JAN											
18...	0	0	0	0	680	680	0	0	0	0	0
FEB											
15...	0	0	0	0	500	570	0	0	0	0	0
MAR											
16...	100	0	0	0	650	620	0	0	0	0	10
APR											
21...	200	0	0	0	520	600	0	0	0	0	0
MAY											
19...	200	0	0	0	640	590	0	0	0	0	0
JUN											
15...	1200	0	0	--	550	630	0	0	0	0	0
22...	2700	0	0	--	190	220	0	0	0	0	0
JUL											
19...	700	0	--	--	210	410	0	0	0	0	0
AUG											
16...	200	0	0	--	330	330	10	0	0	0	0
SEP											
20...	100	0	0	--	380	390	0	0	0	0	0

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT											
20...	10	300	20	60	80	1000	990	.0	--	0	0
NOV											
17...	0	220	30	80	60	1500	1500	--	--	0	0
DEC											
28...	10	440	10	40	40	1500	1500	--	--	0	0
JAN											
18...	0	270	30	60	40	1500	1400	--	--	0	0
FEB											
15...	0	160	10	80	80	1400	1300	--	--	0	0
MAR											
16...	0	300	10	120	120	1400	1300	.0	--	0	0
APR											
21...	0	170	20	80	60	720	640	.0	.0	0	0
MAY											
19...	0	250	20	60	60	700	500	.0	--	0	0
JUN											
15...	0	670	10	60	60	650	500	--	--	0	0
22...	0	1400	40	20	20	160	40	.0	--	0	0
JUL											
19...	0	600	10	50	50	630	550	--	--	0	0
AUG											
16...	0	190	20	80	50	180	110	.0	--	0	0
SEP											
20...	0	190	30	80	80	570	510	.0	--	0	0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
JUN					
22...	0835	10	2050	117	3.3

07184070 DEER CREEK NEAR HALLOWELL, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to September 1977.
WATER TEMPERATURE: March 1977 to September 1977.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since March 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,930 micromhos April 12, 13; minimum daily, 1,240 micromhos May 28.
WATER TEMPERATURES: Maximum daily, 28.5°C June 4; minimum daily, 9.5°C March 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
JUN 21...	1.1	4100	7.8	10	372	292	238	12	207	170	2420

DATE	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
JUN 21...	1.0	1.0	3.6	.09	.70	.48	.10	.21	.31	.44

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)
JUN 21...	600	0	310	380	0	20	0	0	10	280

DATE	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
JUN 21...	650	90	50	220	400	340	.0	10	390

07184070 DEER CREEK NEAR HALLOWELL, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT										
19...	.06	3750	7.8	9.0	15	--	10.5	10	--	--
NOV										
17...	.27	3650	7.8	4.0	20	--	11.2	4	--	--
DEC										
28...	.34	3900	8.3	2.0	15	--	13.0	--	--	--
JAN										
19...	.53	4000	7.8	1.0	20	--	14.2	8	--	.7
FEB										
15...	1.3	3600	6.7	5.5	9	--	14.1	5	--	.3
MAR										
16...	2.0	3800	8.1	10.5	10	--	10.7	48	--	.2
APR										
20...	7.1	1740	7.1	18.5	--	1100	9.3	20	--	.1
MAY										
03...	11	3000	8.0	24.5	--	40	9.3	--	--	.1
19...	2.0	3700	8.0	22.5	--	29	7.9	--	--	.1
JUN										
07...	1.7	3350	8.2	23.5	--	16	8.0	21	--	.2
20...	182	2100	7.6	25.0	--	66	6.6	--	90	.1
22...	210	1800	7.8	23.5	--	210	6.6	--	72	.1
JUL										
20...	1.1	3180	7.9	29.0	--	30	7.8	22	--	.2
AUG										
17...	16	2410	8.0	25.5	--	31	7.6	--	60	.1
SEP										
21...	5.2	2970	8.1	18.0	25	25	8.7	15	--	.1

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT									
19...	--	360	250	240	11	240	0	197	2200
NOV									
17...	--	380	260	230	12	260	0	213	2300
DEC									
28...	--	380	260	250	12	240	0	197	2200
JAN									
19...	34	400	300	--	--	270	0	221	2500
FEB									
15...	13	--	--	--	--	200	0	164	1700
MAR									
16...	12	400	280	--	--	240	0	197	2300
APR									
20...	7.0	150	86	96	6.4	95	0	78	880
MAY									
03...	5.0	280	180	220	9.7	180	0	148	1600
19...	6.0	370	260	240	12	220	0	180	2200
JUN									
07...	8.0	360	260	260	12	200	0	164	2400
20...	7.0	190	120	200	9.4	130	0	107	1200
22...	6.0	160	92	160	8.1	110	0	90	920
JUL									
20...	9.0	330	240	240	14	210	0	172	2100
AUG									
17...	7.0	220	120	200	10	140	0	115	1300
SEP									
21...	6.0	290	210	210	9.0	180	0	150	1800

07184070 DEER CREEK NEAR HALLOWELL, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT 19...	14	1.0	1.0	5.8	3280	4.35	.52	--	.02
NOV 17...	15	.9	.9	4.8	3330	4.53	2.43	--	.00
DEC 28...	13	.9	.9	3.5	3240	4.41	2.97	--	.02
JAN 19...	11	1.0	1.0	4.4	--	--	--	--	.02
FEB 15...	16	.8	.8	1.8	--	--	--	--	.02
MAR 16...	18	.9	.9	2.8	--	--	--	--	.02
APR 20...	11	.8	.8	.8	1280	1.74	24.5	.20	.20
MAY 03...	18	.8	.8	3.4	2400	3.26	76.5	.10	.10
19...	17	.8	.8	3.0	3210	4.37	17.3	.10	.10
JUN 07...	15	.9	.9	3.2	3410	4.64	16.5	.10	.00
20...	11	.6	.6	3.8	1800	2.45	885	.10	.10
22...	11	.6	.6	4.1	1410	1.92	799	.10	.10
JUL 20...	19	.9	.9	3.8	3050	4.15	9.06	.00	.00
AUG 17...	18	.7	.8	2.5	1940	2.64	87.0	.10	.10
SEP 21...	13	.8	.5	4.8	2830	3.85	40.0	.10	.10

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT 19...	.10	.10	.22	.20	--	--	--	--	--
NOV 17...	.00	.00	.07	.22	--	.04	.00	--	--
DEC 28...	.00	.10	.05	.01	--	.01	.00	--	.06
JAN 19...	.20	.10	.12	.16	--	.07	.01	--	.00
FEB 15...	.10	.10	.21	.16	--	.27	.09	--	.08
MAR 16...	.10	.10	.12	.04	--	.09	.01	--	.06
APR 20...	--	.90	.17	.20	.53	--	.03	.01	.03
MAY 03...	--	.40	.04	.15	.14	--	.01	.01	.03
19...	--	.40	--	--	.03	--	.00	.00	.00
JUN 07...	--	.00	--	--	.07	--	.01	.00	.00
20...	--	.40	--	--	.28	--	.17	.10	.31
22...	--	.40	--	--	.29	--	.14	.04	.12
JUL 20...	--	.00	.04	.08	.03	--	.01	.02	.06
AUG 17...	--	.40	.09	--	.05	--	.00	--	--
SEP 21...	--	.40	.01	.25	.03	--	.03	.00	.00

07184070 DEER CREEK NEAR HALLOWELL, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
19...	500	300	0	0	330	330	0	0	10	10	10
NOV											
17...	0	0	0	0	480	480	0	0	0	0	0
DEC											
28...	1800	1300	0	0	420	400	0	0	0	0	0
JAN											
19...	100	0	0	0	450	440	0	0	0	0	0
FEB											
15...	0	0	0	0	290	310	0	0	0	0	0
MAR											
16...	100	0	0	0	440	450	0	0	0	0	10
APR											
20...	36000	0	0	0	140	170	0	0	30	0	20
MAY											
03...	1300	0	0	0	400	380	0	0	0	0	0
19...	400	0	0	0	530	550	0	0	0	0	0
JUN											
07...	1400	0	0	--	350	370	0	0	0	0	0
20...	8400	0	0	--	200	230	0	0	0	0	0
22...	8300	0	0	--	140	160	0	0	0	0	0
JUL											
20...	1000	0	--	--	390	380	0	0	0	0	10
AUG											
17...	1400	0	0	--	200	190	0	0	0	0	0
SEP											
21...	1300	0	1	0	270	270	<10	5	20	0	<10

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT											
19...	10	560	40	50	40	1200	1100	1.0	--	0	5
NOV											
17...	0	490	20	60	40	910	900	--	--	0	0
DEC											
28...	0	380	10	60	40	700	690	--	--	0	0
JAN											
19...	0	310	40	60	60	480	470	--	--	0	0
FEB											
15...	0	240	10	40	20	600	590	--	--	0	0
MAR											
16...	10	240	10	120	120	10	210	.0	--	0	0
APR											
20...	0	16000	10	200	40	1200	600	.0	.0	780	0
MAY											
03...	0	810	20	40	40	340	140	.0	.0	0	0
19...	0	410	30	50	50	70	200	.0	--	0	0
JUN											
07...	0	980	20	40	40	400	240	--	--	0	0
20...	0	4100	20	40	20	680	200	.0	--	10	0
22...	0	3600	30	20	20	460	120	.0	--	10	0
JUL											
20...	10	750	10	20	20	260	150	--	--	0	0
AUG											
17...	0	1000	20	20	20	270	90	.0	--	0	0
SEP											
21...	2	1100	10	100	25	340	140	1.6	.0	20	10

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
APR					
20...	1335	7.1	--	1320	25
MAY					
03...	1430	20	--	110	7.5
JUN					
20...	1015	182	2100	327	161
22...	0920	210	1000	337	191
AUG					
17...	0915	16	2410	58	2.6

07184070 DEER CREEK NEAR HALLOWELL, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	3760	2800	3310		3450	
2						---	3740	2740	3370		3400	
3						---	3760	2860	3420		3480	
4						---	3790	3110	3520		3450	
5						---	3820	3210	3530		3430	
6						---	3780	3270	3540		3460	
7						---	3760	3340	3580		3480	
8						3520	3770	3360	---		3490	
9						3580	3850	3350	---		3550	
10						3660	3890	3390	---		3150	
11						3700	3910	3430	---		2160	
12						3660	3930	3470	---		2860	
13						3700	3930	3480	---		2920	
14						3760	3920	3510	---		2800	
15						3800	3910	3570	---		2550	
16						3800	3850	3510	---		2380	
17						3790	3840	3490	---		2360	
18						3790	3820	3540	---		---	
19						3810	3770	3560	---		---	
20						3820	3800	2860	2170		---	
21						3850	3620	3210	---		---	
22						3820	3560	3390	---		---	
23						3820	3280	3420	---		---	
24						3840	3610	3460	---		---	
25						3850	3460	3480	---		---	
26						3830	3430	3510	---		---	
27						3770	3420	1910	---		---	
28						3730	3470	1240	---		---	
29						3730	3550	3390	---		---	
30						3760	3570	3300	---		---	
31						3770	---	3260	---		---	

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	14.0	20.0	25.5		26.0	
2						---	16.5	21.0	27.0		25.5	
3						---	15.5	22.5	27.0		26.0	
4						---	14.5	22.5	28.5		26.0	
5						---	10.5	22.5	27.5		26.5	
6						---	14.0	23.0	26.5		27.5	
7						---	16.0	25.0	25.5		28.0	
8						14.0	17.5	24.5	---		27.5	
9						12.5	19.0	24.0	---		27.5	
10						12.0	18.0	23.0	---		28.0	
11						13.0	18.5	22.5	---		26.0	
12						9.5	19.0	23.0	---		25.5	
13						12.0	18.5	23.0	---		25.5	
14						13.5	19.5	24.0	---		26.0	
15						13.0	19.5	24.5	---		27.0	
16						12.5	21.5	23.0	---		28.0	
17						11.5	20.5	23.0	---		27.0	
18						14.0	19.5	24.0	---		---	
19						13.5	20.5	24.0	---		---	
20						12.0	19.5	23.5	24.5		---	
21						10.5	20.0	23.5	---		---	
22						10.5	19.0	24.0	---		---	
23						12.5	18.5	24.0	---		---	
24						13.5	18.5	25.0	---		---	
25						13.5	18.0	26.0	---		---	
26						14.5	18.5	26.5	---		---	
27						15.0	19.5	26.0	---		---	
28						14.5	21.5	26.0	---		---	
29						15.5	21.0	25.5	---		---	
30						16.0	21.0	26.0	---		---	
31						13.0	---	25.0	---		---	

07184000 DEER CREEK NEAR OSWEGO, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT										
20...	.21	3130	7.1	9.5	5	--	9.4	8	--	--
NOV										
16...	.56	2930	7.5	5.0	4	--	9.2	4	--	--
DEC										
28...	.38	3500	7.7	4.0	5	--	11.8	--	--	.4
JAN										
19...	.61	4100	7.4	.5	7	--	12.9	12	--	.7
FEB										
16...	2.4	2950	7.6	4.5	5	--	13.5	11	--	.2
MAR										
15...	2.8	3500	7.7	14.5	8	--	9.0	--	54	.4
APR										
20...	.52	3650	7.4	20.0	--	21	7.2	22	--	.3
MAY										
19...	3.0	3600	7.7	23.0	--	27	6.2	--	--	.3
JUN										
15...	.66	3350	7.6	25.0	--	14	4.7	25	--	.3
22...	246	1290	7.4	22.5	--	37	6.6	--	55	.1
JUL										
20...	1.8	3010	7.7	31.5	--	17	9.5	26	--	--
AUG										
17...	14	2360	7.8	26.0	--	26	7.0	13	--	--
SEP										
21...	6.5	2810	7.9	18.0	--	25	7.8	13	--	.1

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT									
20...	--	320	180	200	9.0	200	0	164	1800
NOV									
16...	--	360	210	210	10	220	0	180	2000
DEC									
28...	21	380	220	220	9.0	230	0	189	2000
JAN									
19...	36	420	300	--	--	270	0	221	2600
FEB									
16...	9.0	--	--	--	--	180	0	148	1600
MAR									
15...	18	370	240	--	--	230	0	189	2100
APR									
20...	15	380	220	250	9.9	210	0	172	2100
MAY									
19...	17	360	240	220	10	200	0	164	2100
JUN									
15...	14	370	250	250	12	190	0	156	2400
22...	5.4	130	59	79	5.3	71	0	58	660
JUL									
20...	--	360	240	200	12	180	0	148	2000
AUG									
17...	--	230	130	190	10	160	0	131	1300
SEP									
21...	7.0	280	180	190	10	160	0	131	1800

07184080 DEER CREEK NEAR OSWEGO, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT									
20...	18	.8	.8	7.0	2640	3.59	1.50	--	.02
NOV									
16...	20	.9	.9	6.5	2930	3.98	4.43	--	.00
DEC									
28...	21	.9	.9	5.3	2970	4.04	3.05	--	.00
JAN									
19...	15	1.0	1.0	4.4	--	--	--	--	.02
FEB									
16...	20	.6	.6	1.3	--	--	--	--	.02
MAR									
15...	22	.9	.9	2.3	--	--	--	--	.02
APR									
20...	30	1.0	1.0	1.4	3100	4.22	4.35	.00	.00
MAY									
19...	19	.9	.9	3.0	3050	4.15	24.7	.10	.10
JUN									
15...	20	1.0	1.0	3.4	3400	4.62	6.06	.00	.00
22...	11	.3	.3	4.1	985	1.34	654	.20	.20
JUL									
20...	22	.9	.9	4.4	2930	3.98	14.2	.00	.00
AUG									
17...	19	.7	.7	3.0	1960	2.67	78.9	.00	.00
SEP									
21...	19	.8	.8	5.6	2570	3.50	59.2	.10	.10

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT									
20...	.60	.10	.07	.14	--	--	--	--	--
NOV									
16...	.00	.00	.01	.11	--	.07	.01	--	--
DEC									
28...	.10	.00	.05	.06	--	.03	.00	--	.00
JAN									
19...	.10	.10	.05	.11	--	.08	.00	--	.01
FEB									
16...	.10	.10	.32	.24	--	.10	.03	--	.00
MAR									
15...	.10	.10	.11	.09	--	.12	.02	--	.03
APR									
20...	--	.00	.21	.01	.05	--	.02	.01	.03
MAY									
19...	--	.40	--	--	.04	--	.00	.01	.03
JUN									
15...	--	.00	--	--	.11	--	.02	.01	.03
22...	--	.90	--	--	.16	--	.14	.07	.21
JUL									
20...	--	.00	.07	.03	.04	--	.01	.00	.00
AUG									
17...	--	.00	.07	--	.05	--	.00	--	--
SEP									
21...	--	.40	.03	.11	.04	--	.03	.00	.00

07184080 DEER CREEK NEAR OSWEGO, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT 20...	100	100	0	0	260	270	0	10	0	0	10
NOV 16...	0	0	0	0	350	340	0	0	0	0	0
DEC 28...	1300	1300	0	0	320	330	0	0	0	0	0
JAN 19...	0	0	0	0	390	380	0	0	0	0	0
FEB 16...	0	0	0	0	210	210	0	0	0	0	0
MAR 15...	100	0	0	0	360	380	0	0	0	0	0
APR 20...	1100	0	0	0	280	300	0	0	0	0	0
MAY 19...	1200	0	0	0	440	420	0	0	0	0	0
JUN 15...	2800	0	0	--	330	370	0	0	0	0	0
22...	4100	0	0	--	120	130	0	0	0	0	0
JUL 20...	1100	0	--	--	340	360	0	0	0	0	10
AUG 17...	1400	0	0	0	190	210	20	20	0	0	0
SEP 21...	1500	0	0	--	210	220	0	0	0	0	0

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT 20...	10	230	280	60	60	410	290	.7	--	0	0
NOV 16...	0	250	50	40	40	350	350	--	--	0	0
DEC 28...	0	310	10	20	20	440	440	--	--	0	0
JAN 19...	0	410	50	60	60	470	470	--	--	0	0
FEB 16...	0	260	10	60	40	410	400	--	--	0	0
MAR 15...	0	400	10	80	80	360	310	.0	--	0	0
APR 20...	0	840	10	40	40	900	790	.0	.0	0	0
MAY 19...	0	920	30	60	60	660	530	.0	--	0	0
JUN 15...	0	1400	10	60	60	690	540	--	--	0	--
22...	0	2800	40	20	20	430	250	.0	--	10	0
JUL 20...	10	770	10	50	50	270	130	--	--	10	0
AUG 17...	0	1100	10	150	120	300	100	.0	--	0	0
SEP 21...	0	880	30	80	80	370	210	.0	--	0	0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
JUN 22...	1015	246	1290	1150	764
AUG 17...	1045	14	2360	90	3.6

07184100 LIGHTNING CREEK NEAR OSWEGO, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to September 1977.
WATER TEMPERATURE: March 1977 to September 1977.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since March 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,400 micromhos April 15, 16, 17; minimum daily, 180 micromhos Sept. 29.
WATER TEMPERATURES: Maximum daily, 31.0°C Sept. 2, 7; minimum daily, 9.5°C March 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
APR										
13...	5.2	1500	8.1	20.0	9	16.4	13	160	78	80
SEP										
08...	2.9	1780	7.6	25.0	10	10.8	14	180	85	--

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
APR										
13...	6.3	160	0	131	750	13	.7	.7	6.4	1180
SEP										
08...	7.0	173	0	142	820	14	.6	.6	7.3	--

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR									
13...	1.60	16.9	.14	.60	.60	.24	.27	.40	.12
SEP									
08...	--	--	.23	.90	1.0	.09	.10	.14	.05

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)
APR											
13...	0	300	0	240	200	0	0	0	0	0	0
SEP											
08...	500	0	0	180	180	0	0	0	0	0	0

DATE	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR										
13...	360	30	0	0	290	90	.0	--	10	10
SEP										
08...	430	10	20	20	190	60	.0	.0	0	20

07184100 LIGHTNING CREEK NEAR OSWEGO, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT										
20...	1.8	2130	7.5	9.0	4	--	10.8	14	--	--
NOV										
16...	2.4	1700	7.8	6.0	4	--	10.2	14	--	--
DEC										
28...	2.3	2850	8.2	4.0	5	--	12.2	--	--	--
JAN										
18...	2.5	2030	8.3	1.0	4	--	12.0	10	--	.3
FEB										
16...	7.1	2300	7.4	4.5	4	--	12.4	11	--	.2
MAR										
15...	11	2220	8.1	15.0	7	--	10.6	--	56	.1
APR										
20...	2.2	2500	7.7	19.5	--	4.0	6.8	23	--	.2
MAY										
02...	318	1130	7.5	21.0	--	55	7.8	--	--	.1
18...	337	1150	7.6	23.0	--	35	7.3	--	--	.2
JUN										
14...	16	1380	8.1	28.0	--	16	10.3	25	--	.1
JUL										
20...	17	985	7.9	32.0	--	8.0	10.9	39	--	--
AUG										
17...	60	1060	7.7	26.5	--	25	6.1	23	--	.2
SEP										
21...	20	1250	7.6	21.5	--	25	7.2	21	--	.2

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT									
20...	--	240	110	110	7.0	220	0	180	1100
NOV									
16...	--	240	110	110	8.0	230	0	189	1100
DEC									
28...	--	240	100	110	7.0	230	0	189	1010
JAN									
18...	16	240	110	--	--	250	0	205	1000
FEB									
16...	12	--	--	--	--	220	0	180	1200
MAR									
15...	5.5	260	120	--	--	180	0	148	1100
APR									
20...	9.0	270	140	140	7.9	230	0	189	1300
MAY									
02...	7.0	110	47	63	5.5	120	0	98	460
18...	8.0	110	51	63	6.0	140	0	115	460
JUN									
14...	4.0	140	73	78	6.6	120	0	98	920
JUL									
20...	--	110	48	44	5.9	170	0	139	410
AUG									
17...	8.0	120	48	58	5.7	150	0	123	450
SEP									
21...	9.0	130	65	70	6.0	130	0	107	610

07184100 LIGHTNING CREEK NEAR OSWEGO, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT 20...	12	.6	.6	7.5	1700	2.31	8.26	--	.05
NOV 16...	15	.6	.6	6.0	1700	2.31	11.0	--	.02
DEC 20...	12	.6	.6	6.0	1600	2.18	9.94	--	.02
JAN 18...	12	.8	.8	6.4	--	--	--	--	.09
FEB 16...	17	.6	.6	4.4	--	--	--	--	.05
MAR 15...	18	.7	.7	5.4	--	--	--	--	.02
APR 20...	20	.8	.8	4.9	2000	2.72	11.9	.00	.00
MAY 02...	26	.5	.5	5.6	779	1.06	669	.40	.40
18...	22	.4	.4	6.3	790	1.07	719	.60	.40
JUN 14...	12	.6	.6	6.5	1300	1.77	52.6	.00	.00
JUL 20...	15	.4	.4	9.5	728	.99	33.4	.00	.10
AUG 17...	16	.5	.5	8.0	782	1.06	127	.10	.10
SEP 21...	14	.6	.6	8.5	970	1.32	52.4	.10	.10

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT 20...	.10	.20	.26	.26	--	--	--	--	--
NOV 16...	.00	.10	.03	.12	--	.09	.00	--	--
DEC 20...	.10	.10	.11	.11	--	.07	.04	--	.01
JAN 18...	.30	.40	.27	.17	--	.06	.00	--	.01
FEB 16...	.10	.20	.11	.43	--	.46	.10	--	.12
MAR 15...	.00	.10	.07	.07	--	.20	.02	--	.05
APR 20...	--	.00	.10	.06	.04	--	.02	.02	.06
MAY 02...	--	1.8	.21	.12	.00	--	.05	.02	.06
18...	--	1.8	--	--	.11	--	.02	.00	.00
JUN 14...	--	.00	--	--	.12	--	.03	.03	.09
JUL 20...	--	.40	.06	.34	.08	--	.03	.01	.03
AUG 17...	--	.40	.14	.32	.06	--	.01	.00	.00
SEP 21...	--	.40	.09	.23	.08	--	.05	.01	.03

07184100 LIGHTNING CREEK NEAR OSWEGO, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
20...	100	100	0	--	200	200	0	30	0	0	10
NOV											
16...	0	0	0	0	310	340	0	0	0	0	0
DEC											
28...	1000	1000	0	0	340	290	0	0	0	0	0
JAN											
18...	0	0	0	0	300	290	0	0	0	0	0
FEB											
16...	0	0	0	0	240	250	0	0	0	0	0
MAR											
15...	200	0	0	0	240	330	0	0	0	0	0
APR											
20...	100	0	0	0	160	220	0	0	0	0	0
MAY											
02...	3200	0	0	0	190	190	0	0	0	0	0
18...	2000	0	0	0	200	200	0	0	0	0	0
JUN											
14...	2400	0	0	--	160	160	0	0	0	0	0
JUL											
20...	1100	0	--	--	130	150	0	0	0	0	0
AUG											
17...	1400	0	0	--	90	130	10	0	0	0	0
SEP											
21...	1900	100	0	--	110	130	0	0	0	0	0

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT											
20...	10	220	60	40	40	300	260	15	.0	0	0
NOV											
16...	0	180	70	0	0	480	400	--	--	0	0
DEC											
28...	0	80	10	0	0	380	340	--	--	0	0
JAN											
18...	0	90	20	40	20	400	380	--	--	0	0
FEB											
16...	0	100	10	20	20	350	290	--	--	150	0
MAR											
15...	0	180	0	20	20	320	200	.0	--	0	0
APR											
20...	0	90	10	0	0	580	490	.0	.0	0	0
MAY											
02...	0	1600	30	0	0	340	110	.0	.0	0	0
18...	0	1600	10	0	0	520	230	.0	--	0	0
JUN											
14...	0	1000	10	20	0	310	40	--	--	0	0
JUL											
20...	0	680	0	0	0	300	150	--	--	0	0
AUG											
17...	0	1000	10	120	50	850	700	.0	--	0	0
SEP											
21...	0	1100	10	20	20	700	550	.0	--	0	0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
APR					
23..	2400	300	--	521	422
MAY					
02...	1600	318	--	137	118
17...	0800	290	900	1030	806
18...	1315	337	1150	155	141
22...	0345	710	550	2780	5330
28...	1445	1000	750	3580	9670
AUG					
12...	1015	290	1400	961	752

07184100 LIGHTNING CREEK NEAR OSWEGO, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	2180				1360	1210
2						---	2080				1350	1270
3						---	2210				1370	1310
4						---	2210				1500	1330
5						---	2260				1560	1330
6						---	2250				1630	1240
7						---	2290				1520	1320
8						1980	2310				1490	1290
9						2020	2300				1510	1240
10						2140	2290				1550	1210
11						2180	2300				1590	---
12						2090	2300				1700	---
13						2110	2330				1350	---
14						2070	2360				1310	---
15						2180	2400				1330	---
16						1850	2400				1090	---
17						1930	2400				1190	---
18						2070	2320				1170	---
19						1800	2280				1100	---
20						1760	2230				1360	---
21						1870	2150				1220	1320
22						1730	2150				1260	1180
23						1790	1720				1460	1280
24						1850	1340				1270	1280
25						1830	1730				590	600
26						2140	1950				1160	620
27						2170	2060				1310	710
28						1990	2120				1420	250
29						2080	2190				1330	180
30						2140	2220				1190	270
31						2100	---				1050	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	14.5				27.5	30.0
2						---	16.0				27.0	31.0
3						---	15.5				27.5	30.5
4						---	15.5				26.5	30.5
5						---	12.0				27.0	27.0
6						---	14.5				28.5	30.0
7						---	17.5				29.0	31.0
8						15.0	19.0				29.5	24.5
9						12.5	19.5				29.5	21.0
10						12.5	19.5				29.5	21.5
11						13.5	20.0				28.0	---
12						10.5	20.5				27.5	---
13						10.5	20.5				27.5	---
14						12.5	20.0				27.5	---
15						13.5	21.0				28.0	---
16						12.5	21.0				28.5	---
17						12.0	21.5				27.0	---
18						13.0	19.0				28.0	---
19						12.5	20.0				27.0	---
20						11.5	20.0				28.0	---
21						11.5	19.5				28.0	23.5
22						9.5	19.5				29.0	24.0
23						12.0	19.0				29.5	24.0
24						13.0	19.5				27.0	23.0
25						13.5	19.0				26.5	22.0
26						15.0	19.0				29.0	22.0
27						15.0	20.0				29.0	23.0
28						15.0	22.5				26.5	22.5
29						15.0	23.0				25.5	21.5
30						15.0	22.5				26.5	21.0
31						13.5	---				28.0	---

07184220 CHERRY CREEK NEAR WEST MINERAL, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to September 1977.
WATER TEMPERATURE: March 1977 to September 1977.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since March 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,160 micromhos April 16; minimum daily, 215 micromhos June 22.
WATER TEMPERATURES: Maximum daily, 25.5°C June 15; minimum daily, 9.0°C March 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
APR										
13...	1.5	2300	7.2	17.0	11	8.3	0	320	140	97

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
APR									
13...	6.9	180	0	148	1500	10	.8	1.6	2170

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR									
13...	2.95	8.79	.11	.50	.50	.31	.31	.18	.25

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR										
13...	10	0	0	210	200	0	0	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR										
13...	10	420	40	0	0	1000	950	.0	10	40

07184220 CHERRY CREEK NEAR WEST MINERAL, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	DIS-SOLVED OXYGEN (MG/L)	CHEM-ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM-ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT										
20...	.45	3210	7.7	7.0	3	--	7.0	14	--	--
NOV										
16...	.30	2630	7.3	3.5	3	--	6.0	14	--	--
DEC										
29...	.21	2980	7.4	2.0	3	--	9.3	--	--	.5
JAN										
18...	.18	2930	7.9	1.0	2	--	5.9	8	--	.7
FEB										
15...	.65	2350	7.6	3.5	3	--	9.4	32	--	.3
MAR										
15...	.73	2700	7.5	13.5	9	--	10.3	--	54	.1
APR										
19...	.35	3200	7.3	19.5	--	4.0	3.6	27	--	.5
MAY										
18...	1.6	2380	7.3	21.5	--	10	5.3	--	--	.2
JUN										
14...	.99	2260	7.5	24.0	--	8.0	4.4	18	--	.2
20...	1570	400	6.9	23.0	--	210	6.2	--	116	.2
JUL										
20...	.95	2320	7.6	26.0	--	19	5.0	34	--	--
AUG										
17...	19	1820	7.2	24.5	--	75	6.8	--	68	.2
SEP										
20...	3.2	1850	7.7	18.0	--	20	6.1	23	--	.2

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
OCT									
20...	--	440	190	110	9.0	270	0	221	1900
NOV									
16...	--	420	180	100	8.0	250	0	205	1800
DEC									
29...	24	420	180	110	8.0	240	0	197	1800
JAN									
18...	35	460	210	--	--	280	0	230	2000
FEB									
15...	14	--	--	--	--	100	0	82	1300
MAR									
15...	7.0	350	140	--	--	100	0	82	1600
APR									
19...	24	430	180	110	8.7	220	0	180	1900
MAY									
18...	12	330	140	89	7.5	160	0	131	1400
JUN									
14...	12	340	140	91	7.2	190	0	156	1600
20...	8.0	40	16	15	3.7	30	0	25	180
JUL									
20...	--	350	150	90	7.3	220	0	180	1400
AUG									
17...	8.0	120	52	31	5.0	52	0	43	500
SEP									
20...	9.0	210	85	57	7.4	110	0	90	900

07184220 CHERRY CREEK NEAR WEST MINERAL, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT 20...	8.0	1.0	1.0	9.4	2800	3.81	3.40	--	.11
NOV 16...	9.0	.9	.9	9.6	2650	3.60	2.15	--	.00
DEC 29...	10	.9	.9	9.0	2660	3.62	1.51	--	.00
JAN 18...	8.0	1.0	1.0	10	--	--	--	--	.05
FEB 15...	16	.6	.6	6.4	--	--	--	--	.20
MAR 15...	19	.8	.9	4.9	--	--	--	--	.00
APR 19...	14	1.1	1.1	3.3	2760	3.75	2.61	.00	.10
MAY 18...	13	.8	.8	6.6	2070	2.82	8.94	.30	.20
JUN 14...	10	.8	.8	5.9	2290	3.11	6.12	.20	.10
20...	6.0	.2	.2	3.5	281	.38	1190	.30	.20
JUL 20...	14	.9	.9	5.9	2130	2.90	5.46	.10	.10
AUG 17...	10	.4	.4	4.6	751	1.02	39.9	.30	.30
SEP 20...	13	.6	.6	10	1340	1.82	11.6	.10	.10

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT 20...	.60	.50	.11	.25	--	--	--	--	--
NOV 16...	.00	.00	.17	.23	--	.06	.00	--	--
DEC 29...	.00	.00	.15	.11	--	.01	.00	--	.00
JAN 18...	.10	.20	.09	.12	--	.04	.00	--	.03
FEB 15...	.90	.90	.33	.28	--	.17	.04	--	.05
MAR 15...	.00	.00	.22	.22	--	.47	.04	--	.02
APR 19...	--	.40	.18	.10	.04	--	.00	.00	.00
MAY 18...	--	.90	--	--	.04	--	.01	.00	.00
JUN 14...	--	.40	--	--	.06	--	.03	.06	.18
20...	--	.90	--	--	.39	--	.33	.10	.31
JUL 20...	--	.40	.15	.10	.04	--	.01	.01	.03
AUG 17...	--	1.3	.18	.28	.15	--	.00	.00	.00
SEP 20...	--	.40	.07	.22	.06	--	.03	.00	.00

07184220 CHERRY CREEK NEAR WEST MINERAL, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT 20...	200	300	0	0	270	200	0	0	10	10	10
NOV 16...	0	0	0	0	240	270	0	0	0	0	0
DEC 29...	1900	1900	0	0	330	270	0	0	0	0	0
JAN 18...	100	0	0	0	320	250	0	0	0	0	0
FEB 15...	0	0	0	0	250	240	0	0	0	0	0
MAR 15...	200	0	0	0	220	210	0	0	0	0	0
APR 19...	100	0	0	0	100	100	0	0	0	0	10
MAY 18...	600	0	0	0	210	210	0	0	0	0	0
JUN 14...	600	0	0	--	170	130	0	0	0	0	0
20...	9200	200	0	--	30	50	0	0	0	0	0
JUL 20...	70	0	--	--	210	200	0	0	0	0	0
AUG 17...	5100	0	0	--	40	60	0	0	0	0	0
SEP 20...	1300	0	0	--	110	110	20	40	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT 20...	20	390	100	50	60	180	80	1.0	--	0	60
NOV 16...	0	290	80	40	40	810	770	--	--	60	30
DEC 29...	0	240	10	30	20	280	240	--	--	0	0
JAN 18...	0	220	60	40	40	660	680	--	--	20	10
FEB 15...	0	170	20	20	20	1600	1600	--	--	50	50
MAR 15...	0	440	0	60	40	720	660	.0	--	150	100
APR 19...	10	240	20	60	40	2700	2600	.0	.0	0	0
MAY 18...	0	640	20	20	20	1200	1100	.0	--	0	0
JUN 14...	0	560	10	20	20	1100	1000	--	--	0	0
20...	0	4700	80	0	0	330	140	.0	--	50	0
JUL 20...	0	680	0	20	20	530	440	--	--	0	0
AUG 17...	0	3100	20	20	20	1000	810	.0	--	80	10
SEP 20...	0	920	10	140	120	760	680	.0	--	10	10

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR 23...	0415	25	1100	277	19
23...	0600	125	--	387	131
MAY 01...	1330	310	--	676	566
03...	1150	16	--	91	4.0
20...	0915	25	1080	565	39
20...	1330	125	630	1040	351
JUN 20...	2010	1550	400	279	1170
AUG 17...	0815	19	1020	1660	88

07184220 CHERRY CREEK NEAR WEST MINERAL, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	2680	1020	1660	800		
2						---	2690	824	1760	1330		
3						---	2710	1220	1900	1700		
4						---	2780	1460	2000	1850		
5						---	2770	1650	2330	1890		
6						---	2790	1710	2770	1890		
7						---	2860	1860	2850	2050		
8						2330	2840	1950	2800	2130		
9						2450	2970	1100	2690	2180		
10						2490	3020	1010	2620	2300		
11						2130	3070	1340	2500	2330		
12						2100	3100	1600	2410	2350		
13						2180	3130	1780	2300	2330		
14						2350	3120	1910	2180	2400		
15						2370	3150	2020	2250	2400		
16						2380	3160	2100	2300	2400		
17						2450	3140	2100	2330	2410		
18						2530	3090	2220	860	2410		
19						2610	2880	2010	230	2410		
20						2600	2520	625	230	2410		
21						2370	2070	895	1400	2610		
22						2420	2400	1130	215	---		
23						2460	763	1440	280	---		
24						2410	1040	1680	575	---		
25						2490	1430	1740	590	---		
26						2490	1650	1840	490	---		
27						2570	1760	1930	415	---		
28						2650	1820	652	315	---		
29						2650	1890	1000	545	---		
30						2640	1920	1260	280	---		
31						2600	---	1430	---	---		

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	19.0	18.0	21.0	19.5		
2						---	21.0	19.0	21.5	22.5		
3						---	20.0	19.5	22.0	23.5		
4						---	20.0	22.0	20.0	24.5		
5						---	17.5	23.5	21.0	23.0		
6						---	16.0	23.0	21.0	22.5		
7						---	20.0	23.5	19.0	24.0		
8						12.0	21.0	24.0	18.5	24.5		
9						12.0	22.0	19.5	21.5	24.5		
10						15.0	21.5	17.5	22.0	25.0		
11						15.0	21.5	18.0	23.5	24.0		
12						10.5	21.5	19.5	24.0	23.5		
13						10.5	21.5	20.0	24.5	22.0		
14						14.5	22.5	21.5	24.0	21.5		
15						15.5	23.5	22.0	25.5	22.0		
16						12.5	22.0	22.5	25.0	22.0		
17						13.5	23.5	22.0	24.5	22.0		
18						16.0	22.5	22.0	19.5	22.5		
19						17.5	20.0	23.0	17.5	22.5		
20						15.5	21.5	17.5	18.0	22.5		
21						11.0	19.5	18.0	19.5	20.0		
22						9.0	16.0	19.5	19.0	---		
23						10.5	15.5	21.5	19.5	---		
24						12.0	16.0	22.0	19.0	---		
25						14.0	15.5	22.0	20.5	---		
26						15.5	15.5	23.0	20.0	---		
27						18.0	16.5	24.0	19.5	---		
28						20.0	19.0	18.0	19.5	---		
29						20.0	19.5	19.5	18.0	---		
30						20.0	19.0	21.0	18.0	---		
31						19.0	---	20.0	---	---		

07184240 LITTLE CHERRY CREEK NEAR WEST MINERAL, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to September 1977.
WATER TEMPERATURE: March 1977 to September 1977.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since March 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,980 micromhos April 19; minimum daily, 130 micromhos June 22.
WATER TEMPERATURES: Maximum daily, 27.0°C Aug. 10; minimum daily, 9.5°C March 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
APR										
13...	3.3	1850	4.2	17.0	2	9.2	3	220	70	71

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
APR										
13...	5.6	4	0	4	1000	8.0	.8	.8	22	1410

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR									
13...	1.92	12.8	.07	.30	.30	.84	1.0	.30	.07

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR										
13...	3200	2800	0	270	190	0	0	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR										
13...	10	480	390	0	0	7500	7100	.0	170	260

07184240 LITTLE CHERRY CREEK NEAR WEST MINERAL, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	DIS-SOLVED OXYGEN (MG/L)	CHEM-ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM-ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT										
19...	1.8	2140	3.3	8.5	1	--	10.7	12	--	--
NOV										
16...	1.1	1530	3.4	3.0	10	--	10.4	22	--	--
DEC										
29...	1.4	1820	3.1	1.5	25	--	11.6	--	--	1.9
JAN										
19...	1.2	2140	3.2	1.0	20	--	12.1	18	--	2.3
FEB										
15...	1.4	1830	3.3	5.0	15	--	10.8	5	--	1.6
MAR										
15...	1.7	1680	3.5	13.0	7	--	8.5	48	--	1.4
MAY										
03...	21	950	4.8	19.0	--	15	7.5	--	--	.5
18...	4.2	1680	3.4	22.5	--	2.0	7.3	--	--	1.3
JUN										
14...	2.4	1620	3.5	26.5	--	1.0	7.3	48	--	1.2
20...	1210	115	6.2	23.5	--	220	5.9	--	92	.2
JUL										
20...	8.8	1610	3.4	23.0	--	1.0	8.1	22	--	1.9
AUG										
17...	5.6	635	4.7	25.0	--	8.0	6.5	13	--	.4
SEP										
20...	6.0	550	3.6	19.0	25	30	6.9	0	--	.1

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
OCT									
19...	--	240	71	65	5.0	0	0	0	1100
NOV									
16...	--	240	71	64	6.0	0	0	0	1100
DEC									
29...	94	250	68	69	5.0	0	0	0	1100
JAN									
19...	110	280	83	--	--	0	0	0	1200
FEB									
15...	79	--	--	--	--	0	0	0	940
MAR									
15...	71	210	56	--	--	0	0	0	910
MAY									
03...	26	100	30	36	4.4	15	0	12	470
18...	62	220	56	62	4.8	0	0	0	920
JUN									
14...	60	210	54	64	5.2	0	0	0	1130
20...	10	10	3.0	2.9	3.3	15	0	12	47
JUL									
20...	92	230	55	49	4.0	0	0	0	920
AUG									
17...	19	84	22	23	4.6	1	0	1	360
SEP									
20...	5.0	61	18	20	4.8	6	0	5	250

07184240 LITTLE CHERRY CREEK NEAR WEST MINERAL, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT									
19...	8.0	.9	.9	30	1540	2.09	7.48	--	.11
NOV									
16...	10	.8	.8	31	1550	2.11	4.60	--	.00
DEC									
29...	10	.6	.8	31	1560	2.12	5.90	--	.00
JAN									
19...	5.0	.9	.9	33	--	--	--	--	.02
FEB									
15...	13	.8	.8	22	--	--	--	--	.11
MAR									
15...	15	.8	.8	21	--	--	--	--	.16
MAY									
03...	10	.6	.6	21	690	.94	40.6	.50	.40
18...	12	.7	.7	26	1320	1.80	15.0	.10	.10
JUN									
14...	10	.9	.8	24	1510	2.05	11.9	.10	.10
20...	4.0	.3	.3	5.8	86	.12	281	.30	.20
JUL									
20...	14	.8	.8	27	1320	1.80	31.4	.10	.10
AUG									
17...	10	.4	.5	15	526	.72	7.95	.20	.20
SEP									
20...	5.1	.5	.3	15	379	.54	6.40	.20	.20

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT									
19...	.90	.50	.74	.95	--	--	--	--	--
NOV									
16...	.00	.00	.82	.89	--	.04	.00	--	--
DEC									
29...	.00	.00	.79	.95	--	.01	.00	--	.04
JAN									
19...	.10	.10	.73	.37	--	.02	.00	--	.01
FEB									
15...	.30	.50	.68	1.1	--	.06	.01	--	.03
MAR									
15...	.70	.70	.52	.52	--	.15	.01	--	.01
MAY									
03...	--	1.8	.49	.59	.12	--	.02	.01	.03
18...	--	.40	--	--	.01	--	.01	.06	.18
JUN									
14...	--	.40	--	--	.03	--	.02	.02	.06
20...	--	.90	--	--	.39	--	.23	.07	.21
JUL									
20...	--	.40	.56	.61	.01	--	.01	.01	.03
AUG									
17...	--	.90	.42	.48	.02	--	.01	.00	.00
SEP									
20...	--	.90	.27	.24	.05	--	.06	.00	.00

07184240 LITTLE CHERRY CREEK NEAR WEST MINERAL, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
19...	9300	9300	0	0	210	210	0	10	0	0	10
NOV											
16...	8900	8100	0	0	250	260	0	0	0	0	0
DEC											
29...	9200	9000	0	0	270	260	0	0	0	0	0
JAN											
19...	9300	9300	0	0	280	170	0	0	0	0	0
FEB											
15...	5800	6600	0	0	230	230	0	0	0	0	0
MAR											
15...	5400	5400	0	0	190	200	0	0	0	0	0
MAY											
03...	1400	1000	0	0	150	190	0	0	0	0	0
18...	4700	4700	0	0	200	180	0	0	0	0	0
JUN											
14...	4200	4200	0	--	150	130	0	0	0	0	10
20...	10000	300	0	--	40	40	0	0	0	0	0
JUL											
20...	9500	9400	--	--	180	170	0	0	0	0	10
AUG											
17...	1800	1400	0	--	80	70	10	10	0	0	0
SEP											
20...	2500	0	2	0	10	30	<10	4	0	0	<10

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT											
19...	10	1800	1700	40	20	9200	9100	.0	--	320	320
NOV											
16...	0	3200	3200	20	20	9400	9400	--	--	260	270
DEC											
29...	0	3900	3700	20	20	9400	9400	--	--	240	240
JAN											
19...	0	5000	5000	20	20	11000	11000	--	--	300	310
FEB											
15...	0	2900	2900	20	20	8300	8500	--	--	250	250
MAR											
15...	0	1800	1700	0	0	8200	8200	.0	--	230	240
MAY											
03...	0	2000	1200	0	0	4700	4600	.0	.0	180	200
18...	0	1300	1300	20	20	8800	8600	.0	--	210	220
JUN											
14...	10	1100	1000	0	0	8600	8600	--	--	180	180
20...	0	5000	180	0	0	290	140	.0	--	50	0
JUL											
20...	10	1100	1000	20	20	7600	7600	--	--	200	200
AUG											
17...	0	440	60	20	20	3000	3000	.0	--	130	130
SEP											
20...	0	1100	40	<100	13	1800	1900	.1	.0	110	80

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR					
23...	0215	120	--	440	143
23...	0600	425	--	844	957
MAY					
20...	1000	120	400	892	289
JUN					
19...	0945	415	170	2420	2680
20...	2055	1210	115	240	784
AUG					
14...	2030	120	370	1330	431
14...	2215	410	420	1270	1410

07184240 LITTLE CHERRY CREEK NEAR WEST MINERAL, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	1800	653	1080	411	1620	1350
2						---	1800	458	1140	894	1610	1410
3						---	1820	851	1160	1140	1630	1450
4						---	1820	1100	1140	1270	1630	1470
5						---	1780	1280	1220	1360	1610	1470
6						---	1770	1390	1250	1430	1610	1380
7						---	1800	1470	1350	1480	1600	1460
8						---	1820	1520	1390	1510	1610	---
9						1630	1860	1550	1470	1530	1620	---
10						1920	1860	1390	1500	1540	1620	---
11						1840	1860	1410	1570	1560	1440	---
12						1790	1880	1450	1600	1580	658	---
13						1820	1880	1490	1640	1590	721	---
14						1800	1900	1530	1620	1600	843	---
15						1720	1920	1580	1680	1620	208	---
16						1640	1930	1620	1690	1630	392	---
17						1580	1950	1660	1690	1640	783	---
18						1580	1960	1700	1390	1650	404	---
19						1680	1980	1680	167	1660	543	---
20						1680	1870	735	144	1670	896	---
21						1740	1840	400	540	1670	1140	---
22						1670	1800	670	130	1680	1270	---
23						1680	424	845	227	1670	1290	---
24						1730	798	841	668	1670	1350	---
25						1720	1090	1030	764	1660	1370	---
26						1720	1300	952	686	1680	1370	---
27						1800	1410	867	494	1680	1450	---
28						1780	1470	1290	993	1660	1450	---
29						1790	1530	858	910	1640	1290	---
30						1780	1560	924	875	1640	1340	---
31						1780	---	869	---	1610	1280	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	14.5	18.0	22.0	22.0	24.0	24.5
2						---	15.5	19.0	22.5	21.5	23.5	25.0
3						---	16.0	19.5	23.5	22.5	24.0	25.5
4						---	12.5	20.0	24.5	23.0	23.0	25.0
5						---	13.5	20.5	25.0	23.0	23.5	24.0
6						---	15.5	20.5	25.0	23.5	24.5	24.0
7						---	17.5	21.5	23.0	23.5	25.5	23.5
8						---	19.5	21.5	22.0	22.5	26.5	---
9						15.0	20.0	20.0	23.5	21.5	26.5	---
10						13.0	20.0	19.0	24.5	22.0	27.0	---
11						14.0	20.5	18.5	25.5	22.5	24.5	---
12						12.0	19.0	18.5	25.5	23.0	22.0	---
13						11.5	20.0	19.0	25.5	23.5	22.5	---
14						13.5	19.0	19.5	25.0	23.5	22.5	---
15						15.0	19.0	20.5	25.0	24.0	23.0	---
16						13.5	19.5	21.0	24.5	24.0	25.5	---
17						12.5	19.0	21.5	24.5	24.0	24.0	---
18						14.0	19.5	21.5	23.5	24.0	22.5	---
19						14.0	19.5	22.0	21.0	24.0	22.5	---
20						12.5	19.0	20.0	22.0	24.0	22.5	---
21						9.5	18.5	20.5	23.0	23.5	23.0	---
22						11.0	18.0	20.5	22.0	24.0	23.5	---
23						12.5	15.0	21.0	23.0	24.0	24.0	---
24						12.5	15.5	21.5	22.0	24.5	24.5	---
25						14.5	15.5	22.0	21.0	25.0	24.5	---
26						15.5	15.5	22.5	22.5	24.0	25.5	---
27						15.5	16.5	22.5	22.5	21.0	25.5	---
28						14.0	19.0	21.5	21.5	20.5	24.0	---
29						12.0	19.5	21.5	21.0	21.5	22.0	---
30						13.0	19.0	22.0	21.5	23.5	23.0	---
31						14.0	---	21.5	---	24.0	24.0	---

07184300 CHERRY CREEK NEAR HALLOWELL, KS

LOCATION.--Lat 37°09'46", long 94°59'43", in NE¼NE¼NE¼ sec.21, T.33 S., R.22 E., Cherokee County, Hydrologic Unit 11070205, at downstream side of highway bridge, 0.6 mi (1.0 km) south of Hallowell.

DRAINAGE AREA.--90 mi² (233 km²), approximately.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 805 ft, from topographic map.

REMARKS.--Records fair October to April and good thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,160 ft³/s (89.5 m³/s) June 23, 1977, gage height, 15.16 ft (4.621 m); minimum daily, 0.48 ft³/s (0.014 m³/s), October 22, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 21	1230	2,180	61.7	13.97	4.258	Sept. 24	1230	1,050	29.7	10.28	3.133
June 23	0315	* 3,160	89.5	15.16	4.621	Sept. 30	1200	1,220	34.6	11.5	3.51

Minimum daily discharge, 0.48 ft³/s (0.014 m³/s) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.9	1.7	.92	1.3	1.9	1.9	344	13	543	7.2	7.1
2	1.0	1.9	1.6	.98	1.5	1.9	1.7	831	9.1	123	7.1	6.2
3	1.0	1.6	1.7	.98	1.6	2.0	1.5	120	6.8	55	6.9	5.7
4	1.0	1.5	1.6	1.0	1.8	2.0	1.5	33	5.7	40	7.0	6.4
5	2.0	1.4	1.7	1.1	1.9	1.9	1.4	20	5.1	32	7.3	13
6	4.0	1.4	1.9	1.2	1.8	1.9	1.4	15	4.6	27	7.3	8.8
7	2.0	1.4	2.0	1.2	1.8	1.8	1.3	13	4.2	24	8.1	5.9
8	1.5	1.4	1.9	1.2	1.7	1.7	1.2	17	3.9	23	7.5	5.2
9	1.2	1.4	1.8	1.0	1.8	1.7	1.1	21	3.8	22	6.1	5.5
10	1.0	1.4	1.9	1.1	1.9	1.6	1.0	18	3.6	21	8.1	5.9
11	.90	1.4	1.8	.98	2.1	2.6	1.0	11	3.2	19	16	6.3
12	.90	1.3	1.8	.86	4.2	4.5	.97	8.5	3.2	18	19	7.0
13	.80	1.4	1.7	.92	4.5	6.6	.91	7.6	3.0	17	14	28
14	.80	1.4	1.7	.98	4.2	4.0	.79	7.1	3.0	15	9.1	41
15	.70	1.4	1.6	1.0	2.7	2.9	.77	6.6	2.9	14	326	71
16	.70	1.6	1.6	1.1	2.4	2.4	.78	6.3	2.8	13	41	69
17	.60	1.5	1.6	1.0	2.2	2.2	.83	6.3	2.8	13	17	33
18	.60	1.6	1.5	.92	2.0	2.1	.91	6.2	3.9	12	35	43
19	.50	1.8	1.5	.86	2.0	2.0	1.0	6.0	460	11	17	41
20	.57	1.9	1.4	.86	1.9	1.8	2.6	62	1090	10	9.9	21
21	.50	1.8	1.3	.98	1.8	1.7	3.7	202	1610	10	8.2	10
22	.48	1.8	1.3	1.0	1.8	1.6	3.7	68	2330	9.6	7.3	10
23	.62	1.8	1.2	1.2	2.0	1.5	160	23	2390	9.4	10	28
24	.99	1.9	1.2	1.5	1.9	1.4	251	12	976	8.8	16	781
25	3.5	1.9	1.1	1.7	1.9	1.5	26	9.0	236	8.4	8.3	740
26	2.5	2.0	1.1	1.9	1.9	1.5	9.7	7.5	277	8.1	6.8	85
27	1.5	1.9	1.1	2.0	2.0	1.7	5.2	6.6	281	8.1	6.2	530
28	1.2	1.8	1.1	2.2	1.9	1.9	3.3	17	154	8.0	6.6	698
29	1.1	1.7	.91	1.7	---	1.9	2.6	66	111	7.7	8.0	150
30	1.4	1.7	.90	1.5	---	2.1	2.2	27	194	7.3	9.9	502
31	1.5	---	.90	1.3	---	2.0	---	18	---	7.3	7.9	---
TOTAL	38.06	48.9	46.11	37.14	60.5	68.3	491.96	2017.7	10193.6	1144.7	671.8	3964.0
MEAN	1.23	1.63	1.49	1.20	2.16	2.20	16.4	65.1	340	36.9	21.7	132
MAX	4.0	2.0	2.0	2.2	4.5	6.6	251	831	2390	543	326	781
MIN	.48	1.3	.90	.86	1.3	1.4	.77	6.0	2.8	7.3	6.1	5.2
AC-FT	75	97	91	74	120	135	976	4000	20220	2270	1330	7860

WTR YR 1977 TOTAL 18782.77 MEAN 51.5 MAX 2390 MIN .48 AC-FT 37260

07184300 CHERRY CREEK NEAR HALLOWELL, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to September 1977.
WATER TEMPERATURE: March 1977 to September 1977.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since March 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,770 micromhos July 19; minimum daily, 330 micromhos June 22.
WATER TEMPERATURES: Maximum daily, 29.0°C July 15, 16, 18-20; minimum daily, 11.5°C March 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
APR										
13...	3.9	1780	7.8	18.0	7	7.4	7	200	80	68

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
APR										
13...	5.8	78	0	64	900	9.0	.8	.8	4.3	1310

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR									
13...	1.78	13.9	.09	.70	.40	.23	.29	.30	.12

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR										
13...	100	0	0	200	140	0	0	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR										
13...	0	360	130	0	0	2000	1900	.0	20	20

07184300 CHERRY CREEK NEAR HALLOWELL, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	DIS- SOLVED OXYGEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT										
19...	.50	1800	4.6	8.5	7	--	8.9	8	--	--
NOV										
16...	1.4	1550	5.8	4.0	3	--	6.1	31	--	--
DEC										
28...	1.8	2000	5.8	3.0	4	--	10.3	--	--	.3
JAN										
18...	.94	2320	5.7	.5	5	--	6.9	18	--	.8
FEB										
16...	2.4	1600	5.9	2.0	5	--	10.1	5	--	.3
MAR										
15...	2.8	1780	6.0	14.5	3	--	8.2	--	62	.2
APR										
20...	1.2	1970	6.5	18.0	--	3.0	3.9	42	--	.2
MAY										
02...	964	270	6.6	19.5	--	200	6.1	--	--	.2
03...	99	560	6.9	18.5	--	45	7.0	--	--	.2
18...	6.1	1460	6.6	20.5	--	2.0	7.1	--	--	.1
JUN										
14...	2.9	1480	6.8	24.0	--	2.0	7.0	21	--	.2
20...	1320	245	6.8	22.0	--	390	6.5	--	99	.2
22...	2520	115	6.8	22.0	--	300	6.2	--	85	.1
JUL										
19...	10	1530	4.6	27.5	--	2.0	7.6	22	--	.4
AUG										
16...	43	268	6.7	23.5	--	90	6.4	--	70	.2
SEP										
20...	21	590	6.9	20.0	20	25	7.2	25	--	.1

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
OCT									
19...	--	210	67	61	6.0	12	0	10	920
NOV									
16...	--	230	80	58	8.0	24	0	20	920
DEC									
28...	13	270	95	77	7.0	4	0	3	1200
JAN									
18...	42	320	110	--	--	4	0	3	1300
FEB									
16...	16	--	--	--	--	8	0	7	910
MAR									
15...	7.5	230	76	--	--	11	0	9	990
APR									
20...	12	240	85	90	8.1	31	0	25	1100
MAY									
02...	9.0	22	6.6	8.1	4.1	21	0	17	96
03...	10	54	20	18	4.4	30	0	25	230
18...	5.0	190	57	56	5.7	9	0	8	800
JUN									
14...	8.0	210	66	64	5.9	32	0	26	1100
20...	8.0	20	7.0	8.0	3.9	22	0	18	88
22...	7.2	9.0	2.5	4.0	2.6	16	0	13	45
JUL									
19...	20	230	64	53	4.7	17	0	14	910
AUG									
16...	10	24	6.6	10	3.7	16	0	13	100
SEP									
20...	7.0	65	22	21	4.9	23	0	19	260

07184300 CHERRY CREEK NEAR HALLOWELL, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT									
19...	7.0	.9	--	22	1320	1.80	1.70	--	.11
NOV									
16...	7.0	.7	.7	18	1340	1.82	5.07	--	.00
DEC									
20...	12	1.0	1.0	24	1700	2.31	4.59	--	.00
JAN									
18...	8.0	1.1	1.1	27	--	--	--	--	.00
FEB									
16...	13	.6	.6	13	--	--	--	--	.00
MAR									
15...	14	.8	.8	10	--	--	--	--	.02
APR									
20...	15	.9	.9	9.0	1570	2.14	5.09	.00	.00
MAY									
02...	8.0	.4	.4	6.8	164	.22	427	.50	.50
03...	9.0	.4	.4	12	369	.50	98.6	.80	.90
18...	11	.8	.8	18	1150	1.56	18.9	.40	.40
JUN									
14...	10	.9	.8	12	1490	2.03	11.7	.30	.30
20...	5.0	.2	.2	5.4	151	.21	538	.40	.30
22...	5.0	.3	.3	4.6	82	.11	558	.30	.10
JUL									
19...	13	1.0	1.0	21	1320	1.80	38.8	.30	.50
AUG									
16...	9.0	.4	.4	6.1	172	.23	20.2	.70	.70
SEP									
20...	5.2	.4	.4	13	404	.56	23.0	.30	.30

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT									
19...	.10	.50	.51	.92	--	--	--	--	--
NOV									
16...	.00	.00	1.0	.93	--	.07	.00	--	--
DEC									
20...	.00	.00	.06	.92	--	.03	.00	--	.00
JAN									
18...	.10	.00	1.1	1.0	--	.07	.00	--	.01
FEB									
16...	.00	.00	.74	.58	--	.14	.03	--	.05
MAR									
15...	.10	.10	.41	.44	--	.08	.01	--	.02
APR									
20...	--	.00	.35	.29	.03	--	.00	.00	.00
MAY									
02...	--	2.2	.43	.25	.24	--	.07	.01	.03
03...	--	4.0	.25	.24	.12	--	.03	.01	.03
18...	--	1.8	--	--	.02	--	.01	.00	.00
JUN									
14...	--	1.3	--	--	.02	--	.01	.01	.03
20...	--	1.3	--	--	1.1	--	.47	.18	.55
22...	--	.40	--	--	.51	--	.28	.04	.12
JUL									
19...	--	2.2	.23	.49	.01	--	.01	.01	.03
AUG									
16...	--	3.1	.19	.35	.10	--	.03	.01	.03
SEP									
20...	--	1.3	.07	.21	.05	--	.04	.01	.03

07184300 CHERRY CREEK NEAR HALLOWELL, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
19...	5900	5900	0	0	240	240	10	0	0	0	10
NOV											
16...	0	0	0	0	250	240	0	0	0	0	0
DEC											
28...	2300	2200	0	0	320	260	0	0	0	0	0
JAN											
18...	1800	1800	0	0	240	310	0	0	0	0	0
FEB											
16...	300	0	0	0	270	170	0	0	0	0	0
MAR											
15...	100	0	0	0	190	180	0	0	0	0	0
APR											
20...	0	0	0	0	150	90	0	0	0	0	0
MAY											
02...	9500	100	0	0	100	120	0	0	0	0	0
03...	4600	300	0	0	140	150	0	0	0	0	0
18...	100	0	0	0	170	190	0	0	0	0	0
JUN											
14...	200	0	0	--	130	140	0	0	0	0	0
20...	21000	200	0	--	40	40	0	0	0	0	0
22...	16000	100	0	--	40	40	0	0	0	0	0
JUL											
19...	1900	1800	--	--	160	160	0	0	0	0	0
AUG											
16...	10000	400	0	--	90	0	0	0	0	0	0
SEP											
20...	2200	0	1	0	60	10	<10	5	0	0	<10

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT											
19...	20	500	350	20	20	9200	9100	.0	--	290	290
NOV											
16...	0	360	290	20	20	6000	6100	--	--	120	120
DEC											
28...	0	130	100	20	20	9200	9300	--	--	170	170
JAN											
18...	0	140	100	20	20	11000	11000	--	--	250	250
FEB											
16...	0	160	190	20	20	4600	4500	--	--	90	90
MAR											
15...	0	170	40	20	20	5300	5300	.0	--	100	100
APR											
20...	0	460	90	0	0	7000	6900	.0	.0	0	0
MAY											
02...	0	4300	110	0	0	450	380	.0	.0	50	0
03...	0	2100	180	0	0	870	850	.0	.0	40	10
18...	0	230	40	0	0	6000	6000	.0	.0	80	80
JUN											
14...	0	260	20	0	0	3600	3500	--	--	0	0
20...	0	10000	180	0	0	450	180	.0	--	90	0
22...	0	7700	100	0	0	280	70	.0	--	60	0
JUL											
19...	0	160	90	20	20	7500	7500	--	--	190	190
AUG											
16...	0	4400	80	0	0	590	450	.0	--	60	10
SEP											
20...	2	1100	90	<100	3	640	620	.1	.0	40	20

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
APR					
23...	0310	90	1400	2170	527
23...	1800	395	--	483	515
MAY					
02...	1445	964	--	204	531
03...	1025	102	--	45	12
20...	1145	90	925	1010	245
JUN					
19...	0650	90	910	681	165
19...	0845	365	900	1790	1760
20...	1630	1320	245	31	110
22...	1225	2520	115	382	2600
AUG					
15...	0300	90	1360	1050	255
15...	0540	365	250	874	861
16...	0700	45	300	190	23
SEP					
24...	0615	680	130	1240	2280

07184300 CHERRY CREEK NEAR HALLOWELL, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	2160	1300	1010	470		---
2						---	2330	650	1220	510		---
3						---	2240	952	1270	822		---
4						---	2330	1220	1290	1050		---
5						---	2240	1370	1260	1250		---
6						---	2110	1490	1340	1270		---
7						---	2110	1560	1360	1390		---
8						1690	2160	1540	1450	1380		---
9						1730	2060	1210	1490	1500		---
10						1770	2100	1540	1560	1550		---
11						1730	2070	1820	1590	1610		---
12						1950	2040	1880	1650	1620		---
13						1940	2180	1810	1680	1580		---
14						2010	2080	1730	1710	1650		---
15						2000	2090	1740	1740	1620		---
16						2030	2110	1700	1830	1670		---
17						2070	2260	1610	1850	1650		---
18						2260	2290	1710	2020	2060		---
19						2040	2250	1850	1100	2770		---
20						2130	2210	1300	390	1780		701
21						2190	2160	834	430	1660		635
22						2270	1630	690	330	1700		882
23						2260	1620	1200	430	1760		733
24						2320	809	1030	560	1720		415
25						2190	988	1020	891	1720		474
26						2320	982	1200	768	1530		389
27						2350	1090	1120	644	1530		454
28						2310	1180	1030	658	1510		519
29						2330	1320	1450	1110	1490		505
30						2260	1440	1010	865	1490		497
31						2150	---	1070	---	1460		---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	15.0	20.5	24.0	24.5		---
2						---	18.5	20.5	24.5	25.0		---
3						---	17.5	22.0	25.5	26.5		---
4						---	17.0	23.0	26.5	27.0		---
5						---	13.5	23.5	27.0	27.5		---
6						---	15.0	24.0	26.5	28.5		---
7						---	17.5	24.5	24.5	28.5		---
8						14.5	19.5	24.5	23.5	27.5		---
9						14.0	20.0	23.5	25.0	27.0		---
10						15.0	20.0	22.0	26.0	27.5		---
11						15.5	20.0	21.0	27.0	27.5		---
12						13.0	20.0	21.0	27.0	28.0		---
13						13.5	20.0	21.0	27.0	28.5		---
14						15.5	20.0	22.5	26.5	28.5		---
15						16.0	21.0	23.5	27.0	29.0		---
16						14.5	21.5	23.5	26.5	29.0		---
17						14.5	21.5	23.5	26.5	28.5		---
18						16.0	21.0	24.0	26.5	29.0		---
19						15.0	21.0	24.0	24.0	29.0		---
20						13.5	21.0	23.5	24.0	29.0		19.0
21						13.0	20.5	23.0	25.5	28.5		22.0
22						11.5	20.0	23.0	25.0	28.5		22.5
23						12.5	18.5	23.5	26.5	28.5		23.0
24						14.5	18.5	24.0	26.5	28.5		20.0
25						15.0	17.5	24.5	25.5	25.0		21.5
26						17.0	17.0	25.0	25.5	26.0		23.0
27						19.0	18.5	25.0	26.0	23.0		23.0
28						18.0	20.0	24.0	26.0	22.5		23.0
29						18.0	20.5	24.0	25.5	23.5		21.0
30						17.5	21.0	24.0	25.5	25.5		21.5
31						15.0	---	23.5	---	26.0		---

07186010 SECOND COW CREEK AT PITTSBURG, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to September 1977.
WATER TEMPERATURE: March 1977 to September 1977.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since March 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,500 micromhos March 21; minimum daily, 129 micromhos June 22.
WATER TEMPERATURES: Maximum daily, 32.5°C July 6, 7, 15, 16; minimum daily, 12.5°C March 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
APR 14...	1.5	1650	7.7	19.0	10	9.0	14	200	110

DATE	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
APR 14...	59	5.4	250	0	205	940	14	.6	.6

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR 14...	1.8	1460	1.99	6.19	1.3	.27	.28	.28	.37

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR 14...	200	100	0	180	170	0	0	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR 14...	0	900	40	0	0	880	840	.6	10	10

07186010 SECOND COW CREEK AT PITTSBURG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	DIS-SOLVED OXYGEN (MG/L)	CHEM-ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM-ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
FEB										
14...	.27	2330	7.4	4.5	6	--	9.2	43	--	.3
MAR										
14...	.30	3500	7.7	16.5	4	--	9.2	38	--	.5
APR										
18...	.03	3230	8.	20.0	--	9.0	11.8	25	--	.4
MAY										
03...	6.0	1200	7.4	19.5	--	6.0	6.0	--	--	.2
16...	.36	1530	7.2	20.0	--	6.0	4.0	--	--	.3
JUN										
08...	.61	872	7.2	20.0	--	8.0	5.3	21	--	.2
19...	930	118	7.1	22.0	--	690	5.6	--	81	.2
20...	2540	142	7.2	20.5	--	660	7.6	--	107	.2
21...	390	425	7.2	23.0	--	85	--	--	77	.1
JUL										
19...	1.9	1850	7.6	27.0	--	5.0	5.9	26	--	--
AUG										
17...	2.0	2120	7.9	25.0	--	9.0	7.9	15	--	.2
SEP										
19...	6.4	670	7.7	21.0	--	15	5.9	23	--	.2

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
FEB									
14...	15	--	--	--	--	180	0	148	1300
MAR									
14...	24	380	310	--	--	290	0	238	2100
APR									
18...	21	350	260	140	8.7	300	0	246	2000
MAY									
03...	8.0	140	75	38	5.2	150	0	123	570
16...	16	160	90	62	6.1	170	0	139	730
JUN									
08...	9.0	85	43	35	5.3	160	0	131	490
19...	9.0	14	2.5	3.7	3.0	38	0	31	34
20...	8.0	14	5.0	4.1	2.8	25	0	21	55
21...	5.0	40	18	11	3.8	65	0	53	135
JUL									
19...	--	230	130	60	5.4	240	0	197	1000
AUG									
17...	9.0	260	160	65	5.8	200	0	164	1200
SEP									
19...	9.0	73	31	21	5.1	130	0	107	230

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
FEB									
14...	12	.6	.6	3.8	--	--	--	--	.07
MAR									
14...	19	.9	.9	3.3	--	--	--	--	.02
APR									
18...	30	1.0	1.0	5.9	2950	4.01	.24	.00	.00
MAY									
03...	13	.6	.6	7.0	924	1.26	15.1	.10	.10
16...	18	.6	.6	7.5	1160	1.58	1.13	.50	.40
JUN									
08...	17	.4	.4	9.4	767	1.04	1.26	.30	.30
19...	7.0	.2	.2	5.2	94	.13	236	1.0	.50
20...	6.0	.2	.2	3.3	106	.14	727	.50	.30
21...	12	.3	.3	5.9	260	.35	274	.40	.30
JUL									
19...	16	.7	.7	8.5	1570	2.14	8.05	.10	.10
AUG									
17...	14	.6	.6	5.1	1810	2.46	9.77	.10	.10
SEP									
19...	15	.5	.5	11	455	.62	7.06	.70	.70

07186010 SECOND COW CREEK AT PITTSBURG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
FEB									
14...	.30	.30	.32	.29	--	.24	.05	--	.08
MAR									
14...	.10	.10	.17	.18	--	.34	.07	--	.05
APR									
18...	--	.00	.31	.12	.07	--	.04	.04	.12
MAY									
03...	--	.40	.27	.30	.27	--	.02	.01	.03
16...	--	1.8	--	--	.10	--	.06	.03	.09
JUN									
08...	--	1.3	--	--	.12	--	.04	.08	.25
19...	--	2.2	--	--	1.1	--	.79	.27	.83
20...	--	1.3	--	--	1.3	--	.72	.48	1.5
21...	--	1.3	--	--	.21	--	.20	.19	.58
JUL									
19...	--	.40	.07	.17	.06	--	.03	.01	.03
AUG									
17...	--	.40	.49	.21	.06	--	.02	.00	.00
SEP									
19...	--	3.1	.25	.27	.16	--	.10	.06	.18

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
FEB											
14...	0	0	0	0	210	170	0	0	0	0	0
MAR											
14...	0	0	0	0	280	170	0	0	10	10	10
APR											
18...	0	0	0	0	270	230	0	0	0	0	10
MAY											
03...	100	0	0	0	160	140	0	0	0	0	0
16...	100	0	0	0	170	150	0	0	0	0	0
JUN											
08...	400	0	0	--	110	120	0	0	0	0	0
19...	29000	1100	0	--	50	10	0	0	0	0	20
20...	23000	200	0	--	20	40	0	0	10	0	10
21...	7200	100	0	--	20	10	0	0	0	0	0
JUL											
19...	100	0	--	--	150	160	0	0	0	0	0
AUG											
17...	300	0	0	--	140	150	0	0	0	0	0
SEP											
19...	1400	0	0	--	60	50	20	10	0	0	0

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
FEB											
14...	0	390	50	40	40	1300	1300	--	--	0	0
MAR											
14...	10	360	20	100	100	280	270	2.0	--	0	0
APR											
18...	10	200	10	60	60	1300	1100	.0	.0	0	0
MAY											
03...	0	350	20	20	20	340	300	.0	.0	0	0
16...	0	640	30	0	0	2100	2100	.0	--	0	0
JUN											
08...	0	1000	10	0	0	750	720	--	--	230	300
19...	0	14000	230	20	0	710	30	.0	--	120	0
20...	0	12000	130	40	0	680	110	.0	--	110	0
21...	0	3900	100	20	20	250	0	.0	--	0	0
JUL											
19...	0	690	10	20	20	750	640	--	--	0	0
AUG											
17...	0	800	20	80	80	360	320	.0	--	0	0
SEP											
19...	0	900	80	140	20	190	130	.0	--	0	0

07186010 SECOND COW CREEK AT PITTSBURG, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	3280	1460	608	801	2130	2200
2						---	3170	1480	718	941	2140	2250
3						---	3230	1240	780	1100	2160	2290
4						---	3240	1490	823	1200	2170	2290
5						---	3240	1420	875	1250	2190	2270
6						---	3220	1380	866	1280	2210	2280
7						---	3260	1350	877	1380	2250	2270
8						---	3260	1280	933	1460	2290	2340
9						---	3280	1300	954	1550	2310	2280
10						---	3280	1040	973	1610	2320	2270
11						---	3300	880	1030	1650	2190	2310
12						---	3300	860	1080	1710	2250	2170
13						---	3310	850	1090	1760	2240	1990
14						---	3300	620	988	1820	2230	1800
15						3410	3300	690	1090	1850	2250	1660
16						3440	3310	620	1310	1890	2280	1480
17						3460	3320	565	1110	1930	2140	1470
18						3390	3300	416	941	1960	2290	1100
19						3450	3250	468	341	1990	2350	725
20						3470	3260	255	169	2000	2320	743
21						3500	3260	488	332	2030	2230	755
22						3450	3230	523	129	2040	2190	847
23						3450	3180	613	257	2050	2160	897
24						3450	3140	733	389	2060	2110	245
25						3430	1630	814	452	2070	2110	354
26						3420	1430	872	517	2090	2110	479
27						3380	1600	948	709	2090	2110	289
28						3270	1500	971	773	2090	2030	386
29						3370	1440	1070	595	2110	2030	340
30						3230	1450	1120	693	2120	2080	506
31						3310	---	726	---	2120	2150	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	18.0	22.5	27.0	28.5	29.5	29.0
2						---	21.5	23.0	28.0	29.0	29.0	29.5
3						---	19.0	24.0	28.5	30.5	29.0	30.0
4						---	18.5	25.0	29.5	31.0	28.0	29.5
5						---	16.0	23.5	30.5	32.0	28.5	28.5
6						---	18.0	24.5	29.5	32.5	29.5	28.5
7						---	19.0	25.5	27.5	32.5	30.5	28.5
8						---	21.5	25.0	26.0	31.5	31.0	28.5
9						---	22.0	24.5	27.5	31.0	31.0	26.0
10						---	21.5	24.0	28.5	31.5	30.5	25.0
11						---	22.0	22.5	29.0	31.0	28.5	26.0
12						---	22.5	21.5	29.0	31.0	27.5	26.0
13						---	22.5	23.0	28.5	31.5	27.5	26.5
14						---	23.0	25.0	29.0	32.0	28.0	25.0
15						17.5	23.5	26.0	29.5	32.5	29.0	23.5
16						16.5	24.5	24.0	29.5	32.5	30.0	23.5
17						15.0	24.0	23.5	29.0	32.0	29.0	24.5
18						18.0	23.0	25.0	28.5	32.0	28.0	26.0
19						16.0	23.5	26.0	26.0	32.0	27.5	26.0
20						14.5	23.5	24.0	25.5	32.0	27.5	25.0
21						14.0	23.5	25.0	27.0	32.0	28.0	24.5
22						12.5	22.0	26.0	26.5	32.0	29.0	25.0
23						15.0	22.5	26.0	27.5	31.5	29.5	25.5
24						16.0	21.5	26.5	28.5	32.0	29.5	24.0
25						17.0	21.5	27.5	28.0	32.0	29.0	24.5
26						18.5	21.0	28.5	29.0	29.5	30.0	25.5
27						19.0	21.0	28.5	30.0	27.5	30.0	25.5
28						19.0	21.0	27.5	30.0	27.5	27.5	25.5
29						19.5	21.5	27.0	29.0	28.5	27.0	23.5
30						18.0	23.0	28.0	29.0	29.5	28.0	25.5
31						18.0	---	27.0	---	30.0	29.0	---

07186010 SECOND COW CREEK AT PITTSBURG, KS--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY					
20...	0400	275	350	1170	869
20...	0830	610	212	1470	2420
JUN					
19...	1100	275	350	1850	1370
19...	1300	610	420	1870	3080
19...	1800	1175	400	1270	4030
19...	2325	1200	270	1040	3370
20...	0945	2540	142	1100	7540
21...	1545	350	400	186	176
SEP					
24...	0920	230	300	777	483
24...	1215	620	130	1050	1760
24...	1715	1175	175	9120	28900

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
JUN										
19...	2325	1200	1040	70	85	94	98	98	100	--
20...	0945	2540	1100	55	70	88	92	98	99	100

07186020 FIRST COW CREEK AT FRONTENAC, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
APR									
14...	1.0	1620	7.5	19.0	7	8.2	20	150	94

DATE	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
APR									
14...	97	8.4	230	0	189	830	55	.4	.4

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR									
14...	3.5	1360	1.85	4.00	1.7	.40	.60	4.6	4.4

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR										
14...	100	0	0	310	330	0	0	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR										
14...	0	340	30	0	0	810	800	.0	10	10

07186020 FIRST COW CREEK AT FRONTENAC, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT										
18...	.17	1280	7.9	8.5	4	--	4.4	24	--	--
NOV										
15...	.25	1170	7.3	4.0	8	--	2.0	46	--	--
DEC										
27...	.21	2100	7.6	4.5	10	--	7.6	--	--	.4
JAN										
17...	.20	2000	7.8	1.0	7	--	4.0	27	--	.4
FEB										
14...	1.6	2000	7.7	5.5	6	--	11.9	30	--	.2
MAR										
14...	1.5	1800	7.5	13.0	3	--	7.1	38	--	.1
APR										
18...	.59	1930	8.0	18.5	--	3.0	7.0	33	--	.5
MAY										
16...	.67	2130	7.4	20.0	--	2.0	1.7	--	--	.6
JUN										
13...	.75	1600	7.3	26.0	--	3.0	4.7	17	--	.3
20...	1650	114	6.9	21.0	--	580	6.6	--	107	.1
21...	388	500	7.1	24.5	--	110	7.0	--	60	.1
JUL										
18...	1.7	1840	7.6	27.5	--	4.0	6.0	22	--	--
AUG										
16...	1.2	1780	7.7	26.0	--	4.0	4.8	18	--	.2
SEP										
19...	2.6	1160	7.7	21.0	--	5.0	4.5	19	--	.2

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT									
18...	--	98	34	150	14	310	0	254	130
NOV									
15...	--	98	34	140	15	300	0	246	140
DEC									
27...	22	160	100	130	14	370	0	303	680
JAN									
17...	22	150	98	--	--	390	0	320	650
FEB									
14...	11	--	--	--	--	190	0	156	850
MAR									
14...	3.0	210	120	--	--	170	0	139	920
APR									
18...	26	160	97	120	13	280	0	230	710
MAY									
16...	30	200	120	100	11	210	0	172	1000
JUN									
13...	14	160	120	85	8.0	200	0	164	960
20...	7.0	11	3.5	3.6	3.3	52	0	43	49
21...	7.0	46	25	18	4.0	52	0	43	215
JUL									
18...	--	180	140	87	8.0	230	0	189	950
AUG									
16...	10	170	130	73	8.1	210	0	172	820
SEP									
19...	11	110	62	45	6.8	140	0	115	480

07186020 FIRST COW CREEK AT FRONTENAC, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT									
18...	150	.8	.8	16	744	1.01	.34	--	6.6
NOV									
15...	140	.8	.8	16	707	.96	.48	--	2.2
DEC									
27...	96	.9	.9	16	1410	1.92	.80	--	.11
JAN									
17...	114	.9	.9	14	--	--	--	--	.16
FEB									
14...	49	.6	.6	5.4	--	--	--	--	.99
MAR									
14...	36	.7	.7	6.4	--	--	--	--	1.0
APR									
18...	98	.9	.9	7.0	1370	1.86	2.18	.70	.70
MAY									
16...	52	.6	.6	7.5	1620	2.20	2.93	4.7	5.1
JUN									
13...	41	.6	.7	4.2	1490	2.03	3.02	.60	.60
20...	6.0	.2	.2	3.4	107	.15	477	1.7	.20
21...	11	.3	.3	7.0	354	.48	294	.40	.30
JUL									
18...	30	.8	.8	6.4	1520	2.07	6.98	.60	.60
AUG									
16...	32	.7	.7	2.8	1350	1.84	4.45	1.0	1.0
SEP									
19...	27	.6	.6	9.5	816	1.11	6.17	.80	.60

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT									
18...	30	29	6.0	6.1	--	--	--	--	--
NOV									
15...	9.7	9.7	2.1	2.3	--	23	6.5	--	--
DEC									
27...	16	.50	9.0	9.0	--	10	3.3	--	11
JAN									
17...	3.8	.70	7.7	7.7	--	21	6.5	--	22
FEB									
14...	8.2	4.4	1.3	1.9	--	3.1	.82	--	3.9
MAR									
14...	4.6	4.6	1.1	1.2	--	5.0	1.3	--	4.1
APR									
18...	--	3.1	2.6	2.0	6.3	--	5.5	5.4	17
MAY									
16...	--	23	--	--	2.4	--	2.1	1.8	5.5
JUN									
13...	--	2.7	--	--	1.4	--	1.2	1.1	3.4
20...	--	.90	--	--	1.2	--	.52	.15	.46
21...	--	1.3	--	--	.74	--	.22	.15	.46
JUL									
18...	--	2.7	.08	.08	.85	--	.70	.68	2.1
AUG									
16...	--	4.4	.15	.23	1.0	--	1.0	1.0	3.1
SEP									
19...	--	3.5	.21	.23	.86	--	.71	.67	2.1

07186020 FIRST COW CREEK AT FRONTENAC, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
18...	100	0	10	10	210	660	0	0	0	0	0
NOV											
15...	0	0	0	0	640	650	0	0	0	0	0
DEC											
27...	1200	1200	0	0	560	560	0	0	0	0	0
JAN											
17...	100	100	0	0	600	570	0	0	0	0	0
FEB											
14...	0	0	0	0	310	340	0	0	0	0	0
MAR											
14...	0	0	0	0	340	320	0	0	0	0	10
APR											
18...	0	0	0	0	380	400	0	0	0	0	0
MAY											
16...	0	0	0	0	330	330	0	0	0	0	0
JUN											
13...	0	0	0	--	260	260	0	0	0	0	0
20...	21000	0	0	--	20	50	10	0	0	0	10
21...	5400	0	0	--	50	80	0	0	0	0	0
JUL											
18...	100	0	--	--	290	310	0	0	0	0	0
AUG											
16...	0	0	0	--	160	190	0	0	0	0	0
SEP											
19...	400	0	0	--	150	150	20	20	0	0	0

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT											
18...	0	250	20	0	0	980	930	.0	--	0	0
NOV											
15...	0	1100	470	0	0	2000	1800	--	--	10	10
DEC											
27...	0	980	50	20	20	3200	3100	--	--	10	0
JAN											
17...	0	570	80	20	40	1800	1700	--	--	0	0
FEB											
14...	0	300	0	20	20	580	570	--	--	40	0
MAR											
14...	20	190	110	0	0	70	70	.0	--	20	0
APR											
18...	0	140	10	0	0	930	830	.0	.0	0	0
MAY											
16...	0	480	30	20	20	700	690	.0	--	0	0
JUN											
13...	0	350	40	20	0	820	810	--	--	10	10
20...	0	11000	100	20	0	540	160	.0	--	120	0
21...	0	3100	80	0	0	350	250	.0	--	20	0
JUL											
18...	0	220	0	0	0	330	260	--	--	0	0
AUG											
16...	0	150	20	20	20	160	140	.0	--	0	0
SEP											
19...	0	360	10	160	120	180	150	.0	--	0	0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
JUN					
20...	1210	1650	114	931	4150
21...	1430	308	500	141	117

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
JUN										
20...	1210	1650	931	60	76	79	92	97	99	100

07186025 EAST COW CREEK AT FRONTENAC, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
APR									
14...	.34	2300	7.4	20.5	22	11.4	11	280	160

DATE	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
APR									
14...	77	5.0	200	0	164	1400	4.0	.8	.8

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR									
14...	4.5	2030	2.76	1.86	1.0	.13	.19	.40	.10

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR										
14...	700	0	0	220	170	0	0	0	0	10

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR										
14...	0	820	30	0	0	2400	2300	.0	30	10

07186025 EAST COW CREEK AT FRONTENAC, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
NOV												
15...	.05	2250	7.5	3.5	10	--	10.9	33	--	--	300	150
DEC												
27...	.04	2800	7.9	3.5	4	--	13.0	--	.2	10	370	190
JAN												
17...	.05	3300	7.6	1.0	7	--	9.5	8	.6	32	440	230
FEB												
14...	.67	1990	7.0	6.5	6	--	11.4	5	.3	15	--	--
MAR												
14...	.77	2480	8.1	14.5	4	--	11.7	38	.2	10	330	160
APR												
18...	.52	2540	7.7	19.5	--	10	8.1	45	.3	16	300	160
MAY												
16...	.24	2380	7.7	22.0	--	10	7.5	--	.3	13	270	160
JUN												
13...	2.4	960	7.4	27.0	--	21	8.1	33	.2	10	100	51
21...	38	1390	7.4	26.5	--	18	--	28	.2	9.0	130	72
JUL												
28...	.50	2040	8.0	34.0	--	7.0	13.0	17	--	--	260	140
AUG												
16...	.64	1650	8.0	32.0	--	10	10.8	18	.1	4.0	210	110
SEP												
19...	.83	1530	8.1	21.5	--	10	10.4	13	.2	8.0	190	97

DATE	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
NOV												
15...	120	11	300	0	246	1200	58	.7	.7	10	1990	2.71
DEC												
27...	96	7.0	260	0	213	1600	7.0	.6	.6	5.2	2410	3.28
JAN												
17...	--	--	340	0	279	2000	6.0	.9	.9	5.4	--	--
FEB												
14...	--	--	190	0	156	980	11	.6	.6	4.9	--	--
MAR												
14...	--	--	240	0	197	1400	13	.7	.7	2.3	--	--
APR												
18...	89	8.7	200	0	164	1400	12	.9	.9	5.4	2080	2.83
MAY												
16...	90	7.0	160	0	131	1400	11	.7	.7	2.5	2020	2.75
JUN												
13...	32	5.6	95	0	78	630	9.0	.4	.5	3.7	881	1.20
21...	40	4.6	120	0	98	610	11	.3	.3	6.7	935	1.27
JUL												
28...	70	7.2	220	0	180	1100	12	.8	.8	2.3	1700	2.31
AUG												
16...	56	6.3	200	0	164	860	11	.6	.6	3.8	1360	1.85
SEP												
19...	50	6.2	190	0	156	770	11	.6	.7	8.3	1230	1.67

DATE	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	PHOSPHATE (PO4) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
NOV												
15...	.27	--	.05	2.5	.20	.44	.62	--	1.2	.24	--	--
DEC												
27...	.26	--	.07	.10	.30	.03	.20	--	.06	.02	--	.01
JAN												
17...	--	--	.05	.00	.20	.42	.22	--	.04	.00	--	.02
FEB												
14...	--	--	.02	.10	.10	.23	.26	--	.17	.03	--	.08
MAR												
14...	--	--	.02	.10	.10	.09	.05	--	.09	.01	--	.01
APR												
18...	2.92	.00	.00	--	.00	.10	.09	.05	--	.01	.00	.00
MAY												
16...	1.31	.10	.10	--	.40	--	--	.03	--	.00	.00	.00
JUN												
13...	5.85	.40	.30	--	1.3	--	--	.15	--	.04	.03	.09
21...	97.7	.10	.10	--	.40	--	--	.07	--	.06	.06	.18
JUL												
28...	2.29	.10	.10	--	.40	.15	.11	.03	--	.01	.01	.03
AUG												
16...	2.35	.10	.10	--	.40	.21	.46	.04	--	.02	.00	.00
SEP												
19...	2.76	.20	.20	--	.90	.10	.21	.02	--	.02	.00	.00

07186025 EAST COW CREEK AT FRONTENAC, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
NOV											
15...	0	0	0	0	290	340	0	0	0	0	0
DEC											
27...	1400	1300	0	0	320	310	0	0	0	0	0
JAN											
17...	100	100	0	0	290	270	10	10	0	0	0
FEB											
14...	0	0	0	0	240	240	0	0	0	0	0
MAR											
14...	0	0	0	0	250	250	0	0	0	0	0
APR											
18...	400	0	0	0	180	200	0	0	0	0	0
MAY											
16...	300	0	0	0	200	190	0	0	0	0	0
JUN											
13...	100	0	0	--	100	90	0	0	0	0	0
21...	1000	100	0	--	90	100	0	0	0	0	0
JUL											
28...	300	0	--	--	210	220	0	0	0	0	0
AUG											
16...	300	0	0	--	60	110	0	0	0	0	0
SEP											
19...	200	0	0	--	110	120	10	10	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV											
15...	0	680	60	40	20	400	350	--	--	10	10
DEC											
27...	0	260	40	20	20	250	240	--	--	0	0
JAN											
17...	0	280	80	60	60	420	430	--	--	10	10
FEB											
14...	0	270	10	20	20	620	600	--	--	10	10
MAR											
14...	0	170	30	80	80	170	130	.0	--	10	10
APR											
18...	0	500	20	20	20	1500	1500	.0	.0	0	0
MAY											
16...	0	530	20	20	20	1200	1100	.0	--	0	0
JUN											
13...	0	1100	50	0	0	820	730	--	--	40	30
21...	0	780	40	0	0	440	340	.0	--	0	0
JUL											
28...	0	240	30	20	20	480	410	--	--	0	0
AUG											
16...	0	400	0	80	80	310	260	.0	--	0	0
SEP											
19...	0	300	0	60	20	150	100	.0	--	0	0

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
JUN					
21...	1405	38	1390	37	3.9

07186030 EAST COW CREEK NEAR PITTSBURG, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
APR									
14...	3.9	1910	7.4	19.0	2	10.3	4	200	110

DATE	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
APR									
14...	73	6.2	41	0	34	1200	13	.8	.8

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR									
14...	8.0	1690	2.30	17.8	.60	.22	.34	.34	.22

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR										
14...	100	0	0	220	140	0	0	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR										
14...	0	720	30	0	0	14000	14000	.0	740	260

07186030 EAST COW CREEK NEAR PITTSBURG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
JAN 18...	.78	2300	5.8	.0	10	--	8.2	22	--	.6
MAR 15...	9.1	1710	8.0	14.0	8	--	--	31	--	--
APR 18...	5.2	2000	5.9	18.0	--	7.0	6.0	47	--	.4
MAY 16...	3.1	1710	6.8	20.5	--	2.0	6.2	--	--	.2
JUN 06...	2.8	1640	6.8	24.5	--	4.0	7.2	17	--	.2
19...	449	296	7.0	22.0	--	330	6.7	--	99	.6
JUL 18...	5.3	1650	6.9	27.5	--	6.0	7.8	22	--	.2
AUG 15...	10	1330	6.6	26.5	--	6.0	7.7	18	--	.2
SEP 19...	19	1230	7.1	22.5	--	15	7.7	19	--	.1

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
JAN 18...	30	230	140	--	--	16	0	13	1300
MAR 15...	14	190	96	--	--	24	0	20	940
APR 18...	19	220	110	81	8.4	14	0	11	1200
MAY 16...	11	180	94	64	6.9	52	0	43	910
JUN 06...	9.0	190	94	73	6.5	54	0	44	1140
19...	31	26	11	10	3.7	20	0	16	120
JUL 18...	10	180	94	83	6.4	47	0	39	920
AUG 15...	11	130	69	49	6.6	33	0	27	680
SEP 19...	6.0	130	62	50	6.7	47	0	39	630

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DISSOLVED NITRATE (N) (MG/L)
JAN 18...	26	.9	.9	14	--	--	--	--	.07
MAR 15...	60	.8	.8	8.0	--	--	--	--	.56
APR 18...	22	1.0	1.0	5.4	1680	2.28	23.6	.00	.10
MAY 16...	17	.8	.8	8.2	1320	1.80	11.0	.40	.30
JUN 06...	15	.9	.8	8.8	1560	2.12	11.9	.30	.30
19...	9.0	.3	.3	4.8	199	.27	241	.50	.40
JUL 18...	20	.9	.9	12	1350	1.84	19.3	.50	.50
AUG 15...	17	.6	.6	11	991	1.35	27.0	.20	.20
SEP 19...	17	.7	.7	10	937	1.27	50.1	.30	.30

DATE	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	PHOSPHATE (PO4) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
JAN 18...	.30	.30	1.2	.77	--	.03	.00	--	.01
MAR 15...	2.1	2.4	--	.31	--	--	--	--	.02
APR 18...	--	.40	.90	.66	.03	--	.00	.00	.00
MAY 16...	--	1.3	--	--	.02	--	.01	.01	.03
JUN 06...	--	1.3	--	--	.02	--	.00	.00	.00
19...	--	1.8	--	--	.66	--	.32	.07	.21
JUL 18...	--	2.2	.28	.34	.02	--	.01	.00	.00
AUG 15...	--	.90	.16	.21	.01	--	.00	.00	.00
SEP 19...	--	1.3	.23	.35	.03	--	.02	.00	.00

07186030 EAST COW CREEK NEAR PITTSBURG, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUM- INUM (AL) (UG/L)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS- SOLVED BORON (B) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CHRO- MIUM (CR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
JAN											
18...	400	600	0	0	260	230	0	0	0	0	0
MAR											
15...	700	100	0	0	230	240	0	0	0	0	0
APR											
18...	900	200	0	0	170	170	0	0	0	0	0
MAY											
16...	200	0	0	0	190	170	0	0	0	0	0
JUN											
08...	300	100	0	--	170	180	0	0	0	0	0
19...	16000	300	0	--	20	40	0	0	0	0	0
JUL											
18...	400	100	--	--	220	190	0	0	0	0	0
AUG											
15...	700	0	0	--	120	130	0	0	0	0	0
SEP											
19...	900	0	0	--	140	110	10	0	0	0	0

DATE	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
JAN											
18...	0	450	140	20	20	20000	19000	--	--	290	290
MAR											
15...	0	460	40	20	20	10000	10000	.0	--	360	400
APR											
18...	0	650	200	20	20	24000	24000	.0	.4	230	230
MAY											
16...	0	300	10	0	0	11000	11000	.0	--	90	80
JUN											
08...	0	210	30	0	0	7400	7450	--	--	30	30
19...	0	10000	130	0	0	2000	1600	.0	--	240	10
JUL											
18...	0	230	10	0	0	11000	11000	--	--	80	90
AUG											
15...	0	270	0	0	0	10000	9800	.0	--	210	200
SEP											
19...	0	700	30	160	0	5400	5600	.0	--	100	80

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SUS- PENDED SEDI- MENT (MG/L)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY)
MAY					
01...	1200	225	650	1570	954
JUN					
15...	0845	225	500	48100	29200
19...	2030	440	300	92	109
AUG					
11...	1115	225	780	1420	863
17...	0700	225	900	814	495

07186040 COW CREEK NEAR WEIR, KS

LOCATION.--Lat 37°18'35", long 94°40'48", in NE¼NE¼ sec.33, T.31 S., R.25 E., Cherokee County, Hydrologic Unit 11070207, at downstream side of highway bridge, 1.5 mi (2.4 km) upstream from Brush Creek and 5.0 mi (8.0 km) east of Weir.

DRAINAGE AREA.--170 mi² (440 km²), approximately.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage, 845 ft (257.6 m) above mean sea level, from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,120 ft³/s (230 m³/s) June 23, 1977, gage height, 16.89 ft (5.148 m); minimum, 3.3 ft³/s (0.093 m³/s) Oct. 19 and Nov. 15, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 20	1415	2,860	81.0	12.73	3.880	June 25	2200	4,240	120	14.54	4.432
June 21	0115	6,540	185	16.22	4.944	Sept. 24	0915	1,570	44.5	9.87	3.008
June 23	0345	* 8,120	230	16.89	5.148						

Minimum discharge, 3.3 ft³/s (0.093 m³/s) Oct. 19, Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	6.6	5.2	4.1	4.9	6.9	7.5	249	36	327	17	14
2	5.0	5.5	5.6	3.6	4.6	6.4	7.0	204	27	271	12	12
3	4.6	4.8	5.9	3.8	5.3	6.9	6.7	63	38	153	10	9.9
4	5.7	4.6	5.7	4.4	5.5	7.1	6.2	34	26	82	9.2	9.1
5	11	4.6	5.6	5.3	5.5	6.5	5.7	30	18	61	8.8	9.1
6	16	4.4	5.6	5.0	5.1	5.9	5.5	22	14	50	8.5	9.5
7	6.6	4.2	6.6	4.7	4.6	5.3	5.5	17	11	42	8.2	9.5
8	8.3	4.0	6.1	4.7	4.6	5.2	5.2	46	9.2	37	7.9	8.8
9	5.2	3.9	5.6	5.1	5.1	5.1	4.9	97	8.7	35	7.3	8.2
10	4.4	4.0	5.5	4.6	5.7	5.0	4.7	31	8.2	33	7.7	8.1
11	4.0	4.4	5.5	4.9	5.8	37	4.4	20	7.2	30	201	8.0
12	4.2	4.5	5.2	5.2	50	57	4.6	14	6.5	28	68	13
13	3.7	4.0	5.1	5.8	36	28	4.5	11	6.3	27	33	19
14	3.7	3.6	5.2	6.2	18	18	4.4	9.9	19	25	28	24
15	4.0	3.4	5.2	6.5	11	13	4.7	9.9	13	23	22	41
16	3.7	4.0	5.5	5.7	8.3	10	4.9	10	11	21	18	42
17	4.7	4.2	5.7	4.9	7.2	8.4	6.5	101	9.7	19	181	56
18	3.5	4.9	5.7	5.2	6.9	8.3	9.8	69	29	18	79	43
19	3.4	6.7	5.7	5.2	6.5	7.9	13	34	790	17	35	34
20	3.6	4.9	5.0	5.7	5.9	6.7	16	2090	4430	15	23	22
21	3.8	4.8	6.1	6.1	5.5	6.0	98	993	5850	14	19	41
22	3.9	4.4	5.8	5.8	5.7	6.0	49	236	5300	14	15	69
23	4.0	4.7	5.7	6.2	12	6.0	287	102	7020	14	15	46
24	3.8	5.2	4.7	7.3	12	5.8	76	64	2940	12	16	1050
25	4.1	5.6	4.6	7.1	8.1	5.8	38	46	1890	11	14	640
26	4.5	5.9	4.3	6.6	7.0	5.9	25	36	1690	11	12	94
27	4.5	5.2	4.4	7.0	6.5	7.4	17	29	351	13	10	498
28	4.2	5.1	4.6	7.2	7.9	13	13	27	368	13	13	347
29	4.4	4.9	4.7	6.0	---	16	10	26	467	13	29	566
30	11	4.9	5.0	5.3	---	11	8.6	26	297	30	20	273
31	8.8	---	4.5	4.9	---	9.0	---	47	---	29	17	---
TOTAL	167.6	141.9	166.6	170.3	271.4	346.5	751.3	4798.8	31690.8	1488	965.6	4031.2
MEAN	5.41	4.73	5.37	5.49	9.69	11.2	25.0	155	1056	48.0	31.1	134
MAX	16	6.7	6.6	7.3	50	57	287	2090	7020	327	201	1050
MIN	3.4	3.4	4.3	3.6	4.6	5.0	4.4	9.9	6.3	11	7.3	8.0
AC-FT	332	281	330	338	538	687	1490	9520	62860	2950	1920	8000

WTR YR 1977 TOTAL 44990.0 MEAN 123 MAX 7020 MIN 3.4 AC-FT 89240

07186040 COW CREEK NEAR WEIR, KS--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to September 1977.
WATER TEMPERATURE: March 1977 to September 1977.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since March 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,880 micromhos May 14; minimum daily, 329 micromhos Sept. 29.
WATER TEMPERATURES: Maximum daily, 26.5°C June 13, Aug. 27; minimum daily, 10.0°C March 27, 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
APR										
14...	9.8	1400	6.9	18.5	13	5.1	16	130	66	81

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
APR										
14...	7.9	100	0	82	640	38	.8	.8	4.4	1030

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR									
14...	1.40	27.3	.00	1.2	.00	1.9	1.9	2.0	1.1

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR										
14...	400	0	0	290	300	0	0	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR										
14...	0	820	30	0	0	6200	6000	.0	40	20

07180040 COW CREEK NEAR WEIR, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT										
19...	3.3	1240	7.1	9.0	6	--	3.5	20	--	--
NOV										
16...	4.0	1100	7.2	3.5	9	--	2.0	30	--	--
DEC										
27...	4.6	1300	7.4	4.5	4	--	7.0	--	--	.3
JAN										
17...	5.1	1500	7.5	1.0	5	--	6.0	32	--	.5
FEB										
15...	12	975	6.5	3.5	5	--	8.3	11	--	.2
MAR										
14...	15	1260	7.5	14.0	4	--	7.8	40	--	.2
APR										
19...	14	1270	7.5	10.5	--	8.0	1.0	--	61	.4
MAY										
02...	192	610	6.6	19.0	--	45	5.8	--	--	.2
18...	72	430	6.9	19.0	--	36	4.2	--	--	.3
JUN										
13...	5.8	1110	7.1	27.5	--	5.0	6.9	33	--	.3
19...	1640	205	6.9	21.0	--	600	4.7	--	96	.2
21...	6440	164	7.0	22.5	--	200	5.0	--	81	.2
JUL										
19...	17	1430	7.1	27.5	--	10	5.0	26	--	.3
AUG										
16...	17	952	6.9	25.0	--	20	2.9	27	--	.3
SEP										
22...	63	895	6.9	19.5	--	70	5.1	43	--	.3

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT									
19...	--	80	45	90	10	100	0	82	410
NOV									
16...	--	75	43	110	13	140	0	115	350
DEC									
27...	16	80	50	110	12	160	0	131	420
JAN									
17...	24	99	52	--	--	200	0	164	460
FEB									
15...	11	--	--	--	--	76	0	62	380
MAR									
14...	12	120	59	--	--	60	0	49	530
APR									
19...	20	76	46	100	12	230	0	189	360
MAY									
02...	12	55	22	23	4.5	38	0	31	230
18...	16	36	15	17	4.8	54	0	44	140
JUN									
13...	13	97	54	73	7.9	120	0	98	550
19...	11	20	7.0	8.6	3.1	17	0	14	91
21...	8.0	18	6.0	9.0	3.5	30	0	25	70
JUL									
19...	13	140	80	75	7.2	92	0	75	600
AUG									
16...	14	88	44	41	6.7	50	0	41	420
SEP									
22...	14	90	43	34	6.0	31	0	25	420

07186040 COW CREEK NEAR WEIR, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT									
19...	58	.8	.8	9.6	787	1.07	7.01	--	3.8
NOV									
16...	80	.8	.8	13	797	1.08	8.61	--	8.4
DEC									
27...	76	.9	.9	12	878	1.19	10.9	--	.36
JAN									
17...	96	.9	.9	7.0	--	--	--	--	.54
FEB									
15...	36	.6	.6	5.9	--	--	--	--	.79
MAR									
14...	48	.7	.6	8.0	--	--	--	--	.93
APR									
19...	75	1.0	1.0	11	833	1.13	31.9	.10	.10
MAY									
02...	15	.5	.5	8.4	385	.52	150	.60	.60
18...	16	.3	.3	6.4	275	.37	54.1	2.4	2.4
JUN									
13...	40	.8	.8	5.6	901	1.23	14.2	2.2	2.2
19...	8.0	.6	.6	4.1	157	.21	695	.70	1.0
21...	5.0	.2	.2	5.3	131	.18	2280	.40	.20
JUL									
19...	34	.8	.8	10	1090	1.48	50.9	1.8	1.8
AUG									
16...	24	.7	.6	10	671	.91	31.9	1.1	1.1
SEP									
22...	20	.5	.6	8.3	649	.88	110	.80	.80

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT									
19...	24	17	4.2	4.3	--	--	--	--	--
NOV									
16...	37	37	8.3	--	--	13	3.3	--	--
DEC									
27...	29	1.6	18	9.8	--	11	3.2	--	10
JAN									
17...	6.6	2.4	11	11	--	12	3.3	--	10
FEB									
15...	14	3.5	3.0	2.9	--	2.5	.75	--	1.8
MAR									
14...	4.1	4.1	1.3	1.3	--	2.2	.62	--	1.6
APR									
19...	--	.40	12	11	7.6	--	6.5	6.2	19
MAY									
02...	--	2.7	.51	.50	.06	--	.06	.02	.06
18...	--	1.	--	--	.90	--	.27	.16	.49
JUN									
13...	--	9.7	--	--	.30	--	.27	.24	.74
19...	--	4.4	--	--	2.1	--	.74	.17	.52
21...	--	.90	--	--	.47	--	.29	.06	.18
JUL									
19...	--	8.0	.19	.20	.17	--	.03	.02	.06
AUG									
16...	--	4.9	.54	.51	.21	--	.05	.01	.03
SEP									
22...	--	3.5	.60	.65	.46	--	.20	.10	.31

07186040 COW CREEK NEAR WEIR, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
19...	0	0	0	0	330	340	0	0	0	0	0
NOV											
16...	0	0	0	0	480	470	0	0	0	0	0
DEC											
27...	1200	1500	0	0	490	470	0	0	0	0	0
JAN											
17...	100	0	0	0	470	500	0	0	0	0	0
FEB											
15...	0	0	0	0	260	240	0	0	0		0
MAR											
14...	100	0	0	0	310	300	0	0	0	0	0
APR											
19...	0	0	0	0	380	420	0	0	0	0	0
MAY											
02...	4100	100	0	0	160	130	0	0	0	0	0
18...	17000	0	0	0	70	50	0	0	0	0	10
JUN											
13...	300	0	0	--	200	240	0	0	0	0	0
19...	27000	400	0	--	40	40	0	0	0	0	10
21...	13000	400	0	--	70	70	0	0	0	0	0
JUL											
19...	600	0	--	--	220	240	0	0	0	0	0
AUG											
16...	1000	0	0	--	110	150	0	0	0	0	0
SEP											
22...	1800	0	0	--	90	100	60	0	0	0	0

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT											
19...	0	430	50	20	20	3600	3500	.0	--	0	0
NOV											
16...	0	1700	690	0	0	4900	4800	--	--	40	20
DEC											
27...	0	550	70	0	0	4000	3900	--	--	10	0
JAN											
17...	0	400	90	40	20	4500	4400	--	--	40	20
FEB											
15...	0	400	20	0	0	5100	5100	--	--	80	60
MAR											
14...	0	360	340	0	0	5900	5900	.8	--	80	70
APR											
19...	0	880	20	0	0	4900	4700	.0	.0	0	0
MAY											
02...	0	2200	20	0	0	3800	3800	.0	.0	120	10
18...	0	8800	50	0	0	1200	950	.0	--	70	0
JUN											
13...	0	550	20	0	0	2900	2900	--	--	10	10
19...	0	15000	140	20	0	1400	650	.0	--	290	0
21...	0	6000	140	0	0	370	220	.0	--	40	0
JUL											
19...	0	1200	20	20	20	4100	4000	--	--	10	10
AUG											
16...	0	1200	0	20	20	6200	6100	.0	--	60	30
SEP											
22...	0	1500	40	320	20	7000	7000	.0	--	160	80

07188040 COW CREEK NEAR WEIR, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	1470	1250	---		---	1070
2						---	1410	1520	---		965	1170
3						---	1390	1690	---		---	1060
4						---	1470	1890	---		---	1120
5						---	1410	1820	---		---	1170
6						---	1420	1780	---		---	1190
7						---	1470	1750	---		---	1210
8						---	1490	1680	---		---	1230
9						---	1410	1700	---		---	1240
10						---	1360	1440	---		---	1250
11						---	1330	1280	---		---	1240
12						---	1310	1260	---		---	1210
13						---	1380	1250	1750		---	1140
14						---	1490	1020	1350		---	1060
15						---	1380	1090	1130		---	1020
16						---	1360	1020	1030		962	958
17						---	1340	980	1250		800	1050
18						---	1320	700	991		534	1530
19						---	1310	---	800		781	926
20						1180	1320	---	900		1070	938
21						1230	1440	---	---		1110	991
22						1480	1110	---	---		1090	841
23						1450	820	---	---		1100	739
24						1390	920	---	---		1490	353
25						1430	1110	---	---		1250	331
26						1410	1190	---	---		1290	635
27						1400	1230	---	---		1290	345
28						1460	1250	---	---		1250	345
29						1460	1290	---	---		1220	329
30						1480	1330	---	---		1130	524
31						1460	---	---	---		1160	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	15.0	19.0	---		---	25.0
2						---	15.0	19.5	---		25.5	25.5
3						---	15.0	20.5	---		---	26.0
4						---	15.0	22.5	---		---	26.0
5						---	14.5	21.0	---		---	25.5
6						---	14.0	22.0	---		---	25.0
7						---	15.5	23.0	---		---	25.0
8						---	15.0	22.5	---		---	25.0
9						---	14.5	22.0	---		---	25.0
10						---	14.5	21.5	---		---	23.0
11						---	16.0	19.5	---		---	22.0
12						---	18.0	18.5	---		---	22.0
13						---	18.5	20.0	26.5		---	22.5
14						---	19.0	22.0	26.0		---	21.0
15						---	19.5	23.0	26.0		---	19.5
16						---	24.0	21.0	26.0		25.0	19.5
17						---	23.0	23.0	26.0		25.0	20.5
18						---	18.5	24.5	23.5		23.5	22.0
19						---	19.0	---	24.0		23.0	22.0
20						14.0	20.0	---	25.0		23.0	21.0
21						13.0	18.5	---	---		24.0	20.5
22						12.5	18.0	---	---		24.5	20.5
23						13.0	16.5	---	---		25.0	21.0
24						13.0	16.5	---	---		25.5	19.0
25						12.0	16.0	---	---		25.0	19.5
26						12.0	16.0	---	---		26.0	20.5
27						10.0	16.5	---	---		26.5	21.0
28						10.0	19.0	---	---		25.0	20.5
29						11.5	19.5	---	---		23.5	19.0
30						12.5	19.0	---	---		23.5	21.0
31						14.0	---	---	---		24.5	---

07186040 COW CREEK NEAR WEIR, KS--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR					
23...	0130	209	--	366	207
MAY					
02...	1245	152	--	113	46
18...	0815	76	430	392	80
19...	1945	1330	450	31300	112000
20...	0200	195	350	2370	1250
20...	0330	680	350	1930	3540
20...	0515	1330	425	1670	6000
JUN					
19...	1130	680	400	38900	71400
19...	2115	1640	205	1200	5310
21...	0955	6800	220	217	3980
AUG					
11...	1245	195	750	434	229

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM
JUN								
19...	2115	1640	1200	59	75	88	94	100

07186050 BRUSH CREEK NEAR WEIR, KS

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to September 1977.
WATER TEMPERATURE: March 1977 to September 1977.

INSTRUMENTATION.--Continuous monitor for specific conductance and water temperatures since March 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,720 micromhos May 21; minimum daily, 220 micromhos April 9.
WATER TEMPERATURES: Maximum daily, 27.0°C July 24, 25; minimum daily, 7.0°C March 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
APR										
14...	2.1	1160	5.8	18.0	2	8.7	4	120	54	44

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
APR										
14...	5.4	9	0	8	640	8.0	.7	.7	21	905

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
APR									
14...	1.23	5.33	.00	.70	.00	.94	.98	.22	.18

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
APR										
14...	600	700	0	160	200	0	0	0	0	0

DATE	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
APR										
14...	0	890	540	0	0	4400	4300	.0	260	260

07186050 BRUSH CREEK NEAR WEIR, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	TOTAL ACIDITY AS H+ (MG/L)
OCT 18...	.13	1420	3.4	9.5	10	--	9.1	16	--	--
NOV 16...	.35	1220	3.4	4.0	5	--	7.4	--	50	--
DEC 27...	.33	1370	3.4	5.0	25	--	9.6	--	--	1.6
JAN 17...	.18	1650	3.3	1.5	70	--	6.9	17	--	1.5
FEB 15...	.38	1120	3.4	3.0	20	--	11.7	7	--	1.1
MAR 14...	.55	1290	3.8	15.0	10	--	9.1	--	54	1.5
APR 19...	.53	1500	3.2	19.0	--	27	5.1	47	--	1.5
MAY 17...	1.2	1580	3.4	19.0	--	8.0	5.0	--	--	1.2
JUN 13...	1.1	1160	3.4	24.0	--	3.0	6.2	8	--	.9
21...	153	700	6.6	23.0	--	56	6.4	37	--	.2
JUL 19...	3.0	1410	3.1	26.5	--	5.0	6.9	12	--	1.4
AUG 16...	1.2	930	3.6	25.0	--	6.0	5.7	10	--	.7
SEP 22...	1.2	1220	3.3	20.0	6	10	6.2	11	--	1.1

DATE	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT 18...	--	120	55	67	7.0	0	0	0	680
NOV 16...	--	120	60	65	9.0	0	0	0	700
DEC 27...	80	110	58	67	7.0	0	0	0	700
JAN 17...	74	130	68	--	--	0	0	0	830
FEB 15...	57	--	--	--	--	0	0	0	510
MAR 14...	74	120	50	--	--	0	0	0	610
APR 19...	74	120	54	67	8.2	0	0	0	700
MAY 17...	60	170	66	50	6.2	0	0	0	840
JUN 13...	47	110	47	58	6.8	0	0	0	720
21...	12	74	29	21	3.8	30	0	25	310
JUL 19...	70	120	55	64	6.4	0	0	0	720
AUG 16...	36	77	32	42	5.8	0	0	0	450
SEP 22...	55	110	45	52	5.5	0	0	0	560

07186050 BRUSH CREEK NEAR WEIR, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)
OCT									
18...	10	.8	.8	34	987	1.34	.35	--	.02
NOV									
16...	11	.8	.8	38	1020	1.39	.96	--	.00
DEC									
27...	9.0	.8	.8	37	1010	1.37	.90	--	.00
JAN									
17...	9.0	.9	.9	39	--	--	--	--	.02
FEB									
15...	12	.5	.5	22	--	--	--	--	.02
MAR									
14...	14	.7	.7	25	--	--	--	--	.02
APR									
19...	14	.8	.8	27	1010	1.37	1.45	.00	.00
MAY									
17...	13	.6	.6	22	1180	1.60	3.98	.10	.10
JUN									
13...	13	.6	.6	26	992	1.35	3.19	.10	.10
21...	8.0	.2	.2	11	476	.65	197	.40	.40
JUL									
19...	16	.9	.9	30	1030	1.40	8.34	.10	.10
AUG									
16...	13	.6	.6	23	650	.88	2.11	.10	.10
SEP									
22...	11	.7	.8	32	826	1.10	2.70	.10	.10

DATE	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PHOS-PHATE (PO4) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
OCT									
18...	.10	.10	.82	1.0	--	.30	1.7	--	.20
NOV									
16...	.00	.00	1.2	1.6	--	.23	.01	--	--
DEC									
27...	.00	.00	1.0	.97	--	.07	.01	--	.01
JAN									
17...	.00	.10	.73	.71	--	.08	.00	--	.02
FEB									
15...	.00	.10	.47	.56	--	.26	.02	--	.05
MAR									
14...	.10	.10	.18	.43	--	.13	.02	--	.03
APR									
19...	--	.00	.23	.25	.12	--	.03	.01	.03
MAY									
17...	--	.40	--	--	.04	--	.02	.01	.03
JUN									
13...	--	.40	--	--	.12	--	.03	.02	.06
21...	--	1.8	--	--	.13	--	.09	.04	.12
JUL									
19...	--	.40	1.1	1.2	.02	--	.01	.01	.03
AUG									
16...	--	.40	.82	.75	.01	--	.00	.01	.03
SEP									
22...	--	.40	1.0	1.0	.02	--	.02	.01	.03

07186050 BRUSH CREEK NEAR WEIR, KS--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
18...	3000	3000	0	0	320	310	0	0	10	0	0
NOV											
16...	3590	3400	0	0	330	350	0	0	0	0	0
DEC											
27...	4000	4000	0	0	290	300	0	0	0	0	0
JAN											
17...	3100	3100	0	0	230	210	0	0	0	0	0
FEB											
15...	1700	1800	0	0	250	250	0	0	0	0	0
MAR											
14...	2700	2600	0	0	310	280	0	0	0	0	0
APR											
19...	2100	2100	0	0	250	200	0	0	0	0	0
MAY											
17...	2200	2100	0	0	150	170	0	0	0	0	0
JUN											
13...	1400	1300	0	--	180	180	0	0	0	0	80
21...	2700	0	0	--	110	90	0	0	0	0	0
JUL											
19...	1800	1700	--	--	220	240	0	0	0	0	0
AUG											
16...	1900	--	0	--	160	130	0	0	0	0	0
SEP											
22...	2500	2300	0	0	140	130	10	12	10	0	<10

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT											
18...	0	3100	3000	0	0	5600	5400	.0	--	370	390
NOV											
16...	0	7000	6900	20	20	6000	6000	--	--	390	400
DEC											
27...	0	12000	12000	0	0	5900	5800	--	--	300	300
JAN											
17...	0	14000	14000	20	20	7200	7300	--	--	350	360
FEB											
15...	0	6900	6900	0	0	3900	4000	--	--	230	230
MAR											
14...	0	6000	5900	20	20	5900	5800	1.0	--	310	310
APR											
19...	0	7700	7300	0	0	6900	6900	.0	.0	240	250
MAY											
17...	0	3700	3300	20	20	4800	4800	.0	--	360	360
JUN											
13...	100	2600	1800	20	20	4600	4600	--	--	800	820
21...	0	3800	120	0	0	1300	1300	.0	--	60	30
JUL											
19...	0	3300	3200	0	0	4300	4200	--	--	270	270
AUG											
16...	0	1600	940	0	0	3600	3500	.0	--	240	--
SEP											
22...	4	3500	3600	100	90	4200	4500	.1	.0	260	270

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
JUN					
21...	1200	153	700	96	40

07186050 BRUSH CREEK NEAR WEIR, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	1150	---	---	685	1260	1250
2						---	1080	---	---	866	1290	1280
3						---	1480	---	---	911	1300	1280
4						---	759	---	---	959	1350	1270
5						---	238	---	---	1000	1350	1290
6						---	274	---	---	1040	1360	1300
7						---	239	---	---	1070	1370	1330
8						---	238	---	---	1110	1390	1300
9						---	228	---	---	1130	1410	1350
10						---	229	---	---	1160	1370	1350
11						---	233	---	---	1220	689	1370
12						---	271	---	---	1220	471	1380
13						---	235	---	1260	1230	466	1360
14						---	261	---	974	1240	506	1330
15						1240	382	---	949	1250	685	1280
16						1600	795	---	453	1250	913	1260
17						1280	920	1580	778	1260	767	1270
18						1630	1200	1220	662	1260	621	1260
19						1640	1500	1310	500	1270	662	---
20						960	1600	1680	452	1270	786	---
21						980	1250	1720	718	1270	894	---
22						630	---	---	515	1270	931	---
23						275	---	---	669	1270	987	---
24						240	---	---	703	1290	1060	---
25						263	---	---	689	1260	1100	---
26						720	---	---	630	1230	1160	---
27						1200	---	---	762	1240	1220	---
28						1460	---	---	783	1250	1240	---
29						1680	---	---	652	1260	1220	---
30						1920	---	---	755	1260	1190	---
31						1430	---	---	---	1210	1210	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	15.0	---	---	22.0	23.5	25.0
2						---	14.0	---	---	22.0	23.5	25.0
3						---	13.5	---	---	23.0	23.5	25.5
4						---	9.5	---	---	23.5	23.0	25.5
5						---	9.0	---	---	23.5	23.5	25.0
6						---	14.0	---	---	23.5	25.0	24.5
7						---	18.0	---	---	24.5	25.5	24.5
8						---	14.5	---	---	24.0	24.5	24.5
9						---	14.0	---	---	22.5	24.0	24.5
10						---	19.0	---	---	23.0	24.5	22.5
11						---	19.0	---	---	24.0	23.5	21.5
12						---	20.0	---	---	24.5	22.0	20.5
13						---	19.5	---	23.5	25.0	22.5	20.5
14						---	19.5	---	22.0	25.5	23.5	22.0
15						13.5	20.0	---	23.5	26.0	24.5	21.5
16						12.0	20.5	---	23.5	26.0	24.0	19.5
17						13.5	19.5	19.5	23.5	26.0	24.0	19.0
18						13.0	19.5	19.0	22.5	26.0	23.0	14.5
19						11.5	18.5	22.0	21.0	26.0	22.0	---
20						10.0	18.0	22.5	22.5	26.0	22.5	---
21						7.0	18.0	23.0	22.5	24.5	23.5	---
22						8.5	---	---	22.5	26.5	24.5	---
23						11.0	---	---	23.0	26.0	24.5	---
24						12.5	---	---	22.0	27.0	25.0	---
25						14.5	---	---	22.0	27.0	24.5	---
26						17.0	---	---	23.5	25.0	25.0	---
27						15.5	---	---	23.0	22.5	25.0	---
28						15.0	---	---	22.5	22.5	23.0	---
29						14.0	---	---	22.5	23.5	23.0	---
30						12.0	---	---	22.5	24.5	22.0	---
31						10.0	---	---	---	24.5	25.0	---

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected.

Records collected at partial-record stations are presented in three tables. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table of stage and discharge for indicated times at flood hydrograph stations.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow, partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Arkansas River basin				
07141240	Pickerel Creek near Larned, Kans.	Lat 38°11'15", long 98°59'04", in NW¼NW¼NW¼ sec.33, T.21 S., R.15 W., Pawnee County, at bridge on county highway, 6 miles east of Larned, and at mile 2.0.	139	1971-77	4-12-77	0
07142200	Rattlesnake Creek near Haviland, Kans.	Lat 37°42'52", long 99°10'29", in SW¼NW¼NW¼ sec.10, T.27 S., R.17 W., Kiowa County, at county bridge, 4 miles west and 7 miles north of Haviland.	363	1967-77	4-12-77	0
07142270	Rattlesnake Creek tributary near Hopewell, Kans.	Lat 37°50'33", long 98°59'09", in SE¼NE¼SE¼ sec.29, T.25 S., R.15 W., Stafford County, at bridge on county highway, 2.5 miles northeast of Hopewell, and at mile 0.2.	163	1971-77	4-12-77	.03
07142540	Wild Horse Creek near St. John, Kans.	Lat 38°03'39", long 98°45'52", in SW¼NW¼SW¼ sec.9, T.23 S., R.13 W., Stafford County, at bridge on county highway, 1 mile west of U.S. Highway 281, 3.5 miles north of St. John, and at mile 2.2.	125	1971-77	4-12-77	.35
07142650	Peace Creek near Sylvia, Kans.	Lat 38°04'34", long 98°26'18", in SW¼NW¼SW¼ sec.4, T.23 S., R.10 W., Reno County, at bridge on county highway, 8.5 miles northwest of Sylvia, and at mile 17.2.	92.0	1971-77	4-11-77	.10
07142670	Peace Creek near Sterling, Kans.	Lat 38°08'43", long 98°15'13", in SW¼SW¼SW¼ sec.7, T.22 S., R.8 W., Reno County, at bridge on county highway, 4.5 miles southwest of Sterling, and at mile 2.8.	136	1971-77	4-12-77	3.5
07142740	Salt Creek near Hutchinson, Kans.	Lat 38°04'23", long 98°02'11", in SW¼SE¼SE¼ sec.1, T.23 S., R.7 W., Reno County, at bridge on county road, 6 miles west of Hutchinson, and at mile 6.5.	103	1971-77	4-13-77	4.9
07144590	North Fork Ninnescah River near Sylvia, Kans.	Lat 37°55'59", long 98°24'36", in NW¼NW¼NW¼ sec.27, T.24 S., R.10 W., Reno County, at county bridge, 1 mile south of Sylvia.	208	1968-77	4-14-77	19
07144620	North Fork Ninnescah River above Silver Creek near Arlington, Kans.	Lat 37°51'09", long 98°09'30", in NW¼NW¼NW¼ sec.25, T.25 S., R.8 W., Reno County, at bridge on county highway, 3 miles southeast of Arlington, and at mile 44.7.	504	1971-77	4-14-77	49
07144640	Silver Creek near Langdon, Kans.	Lat 37°47'54", long 98°19'59", in SW¼SW¼NW¼ sec.8, T.26 S., R.9 W., Reno County, at bridge on county highway, 4 miles southwest of Langdon, and at mile 15.7.	103	1971-77	4-13-77	9.9
07144660	Silver Creek near Arlington, Kans.	Lat 37°50'30", long 98°11'47", in NE¼SE¼SE¼ sec.28, T.25 S., R.8 W., Reno County, at bridge on State Highway 14, 4 miles south of Arlington, and at mile 3.9.	194	1971-77	4-14-77	27
07144680	Goose Creek near Arlington, Kans.	Lat 37°49'24", long 98°11'32", in NE¼NE¼NE¼ sec.4, T.26 S., R.8 W., Reno County, at bridge on State Highway 14, 5 miles south of Arlington, and at mile 0.8.	46.6	1971-77	4-13-77	4.1

Discharge measurements made at low-flow partial-record stations during water year [illegible]--continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Measurements	
					Date	Discharge (ft³/s)
		Arkansas River basin--continued				
07144740	Red Rock Creek near Castleton, Kans.	Lat 37°53'56", long 98°00'35", in SE¼SW¼SW¼ sec.5, T.25 S., R.6 W., Reno County, at bridge on county highway, 3 miles northwest of Castleton, and at mile 2.8.	61.2	1971-77	4-14-77	4.4
07144890	South Fork Ninnescah River at Pratt, Kans.	Lat 37°38'03", long 98°44'15", in NW¼SW¼SW¼ sec.3, T.28 S., R.13 W., Pratt County, at bridge on U.S. Highway 281, at Pratt, and at mile 136.4.	97.1	1971-77	4-12-77	12
07145220	Smoots Creek near Murdock, Kans.	Lat 37°38'13", long 97°54'06", in SE¼SE¼SE¼ sec.6, T.28 S., R.5 W., Kingman County, at bridge on county highway, 2.5 miles northeast of Murdock, and at mile 6.6.	142	1971-77	4-14-77	15
07148200	Mule Creek near Wilmore, Kans.	Lat 37°16'55", long 99°02'34", in SE¼SW¼SE¼ sec.3, T.32 S., R.16 W., Comanche County, at bridge on U.S. Highway 160, 10 miles southeast of Wilmore.	129	1954-77	4-15-77	12
07148580	Turkey Creek near Croft, Kans.	Lat 37°29'52", long 98°56'56", in NE¼NE¼NW¼ sec.27, T.29 S., R.15 W., Pratt County, at bridge on county highway, 2.5 miles east on Croft, and at mile 9.6.	26.7	1971-77	4-12-77	3.5
07148600	Medicine Lodge River at Sun City, Kans.	Lat 37°22'13", long 98°54'53", in NW¼SE¼SE¼ sec.2, T.31 S., R.15 W., Barber County, at bridge, 0.5 mile south of Sun City.	335	1954-77	4-15-77	36
07148900	Elm Creek at Medicine Lodge, Kans.	Lat 37°16'25", long 98°34'28", in NW¼NW¼SE¼ sec.12, T.32 S., R.12 W., at bridge on U.S. Highway 160 at Medicine Lodge.	167	1955-77	4-15-77	36
07151200	Chikaskia River near Zenda, Kans.	Lat 37°28'23", long 98°16'55", in NE¼SE¼SE¼ sec.34, T.29 S., R.9 W., Kingman County, at bridge on county highway, 2 miles north of Zenda, and at mile 127.7.	89.9	1971-77	4-15-77	20
07151290	Sand Creek near Zenda, Kans.	Lat 37°24'41", long 98°16'55", in NE¼NE¼NE¼ sec.27, T.30 S., R.9 W., Kingman County, at bridge on county highway, 2 miles south of Zenda, and at mile 5.9.	136	1971-77	4-15-77	10

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		Big Nemaha River basin					
06813700	Tennessee Creek tributary near Seneca, Kans.	Lat 39°48'46", long 96°02'44", in SE¼SW¼ sec.2, T.3 S., R.12 E., Nemaha County, above culvert on county highway, 1.8 mi (2.9 km) southeast of Seneca.	0.90	1957-77	9-12-77	18.49	1,150
		Walnut Creek basin					
06815300	Walnut Creek at Reserve, Kans.	Lat 39°58'20", long 95°33'10", in SW¼SW¼SE¼ sec.7, T.1 S., R.17 E., Brown County, at downstream side of highway bridge, 0.6 mi (1.0 km) east of Reserve.	111	1977	5-20-77	20.83	4,000
		Wolf River basin					
06815700	Buttermilk Creek near Willis, Kans.	Lat 39°45'16", long 95°27'02", in SW¼SW¼ sec.30, T.3 S., R.18 E., Brown County, at downstream side of county highway bridge, 3.6 mi (5.8 km) northeast of Willis. Published as "South Branch Wolf Creek tributary" 1957-60, as "South Fork Wolf River tributary" 1961.	3.74	1957-77	9-12-77	18.06	3,300
06815800	Wolf River near Sparks, Kans.	Lat 39°49'20", long 95°11'30", in SW¼SW¼NW¼ sec.4, T.3 S., R.20 E., Doniphan County, at downstream side of county bridge, 2.4 mi (3.9 km) south of Sparks.	220	1977	9-12-77	32.00	23,000
		White Clay Creek basin					
06818260	White Clay Creek at Atchison, Kans.	Lat 39°33'33", long 95°07'38", in SW¼NE¼ sec.1, T.6 S., R.20 E., Atchison County, on right bank at center of highway bridge, on 10th Street in Atchison and 0.15 mi (0.24 km) downstream from Brewery Creek.	13.1	1972-77	9-13-77	13.79	1,600
		Kansas River basin					
06844800	South Fork Sappa Creek tributary near Goodland, Kans.	Lat 39°19'14", long 101°37'57", in NW¼NW¼ sec.36, T.8 S., R.39 W., Sherman County, below culvert on county highway, 4.5 mi (7.2 km) southeast of Goodland.	4.98	1957-77	6-24-77	11.77	32
06845100	Long Branch Draw near Norcatur, Kans.	Lat 39°54'06", long 100°10'43", in SW¼SW¼ sec.6, T.2 S., R.25 W., Decatur-Norton County line, on downstream side of county highway bridge, 4.7 mi (7.6 km) north of Norcatur.	31.7	1957-77	5-25-77	14.99	140
06846000	Beaver Creek at Ludell, Kans.	Lat 39°50'50", long 100°57'30", in NW¼SW¼ sec.30, T.2 S., R.32 W., Rawlins County, at downstream side of bridge on county highway, 120 ft (37 m) downstream from Chicago, Burlington, and Quincy Railway Co. bridge, 0.5 mi (0.8 km) south of Ludell and 9.6 mi (15.4 km) downstream from Little Beaver Creek. Prior to June 30, 1932, at site 120 ft (37 m) upstream and at datum 1.7 ft (0.5 m) higher.	1,400	1930-32‡, 1946-53‡, 1961-77	9- 2-77	11.00	1,000

‡ Operated as a continuous-record gaging station.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		Kansas River basin--continued					
06846200	Beaver Creek tributary near Ludell, Kans.	Lat 39°48'53", long 100°52'19", in SE¼SE¼ sec.2, T.3 S., R.32 W., Rawlins County, at downstream end of culvert on U.S. Highway 36, 5.4 mi (8.7 km) southeast of Ludell.	10.2	1957-77	9- 1-77	c14.7	640
06847600	Prairie Dog Creek tributary at Colby, Kans.	Lat 39°23'28", long 101°02'43", in SW¼NW¼NE¼ sec.6, T.8 S., R.33 W., Thomas County, at downstream side of bridge on Franklin Avenue in Colby. Prior to Mar. 31, 1971, at site 0.3 mi (0.5 km) upstream and at same datum.	7.53	1957-77	8- 1-77	11.82	290
06848200	Prairie Dog Creek tributary near Norton, Kans.	Lat 39°51'15", long 99°53'17", in NW¼NW¼ sec.26, T.2 S., R.23 W., Norton County, at downstream side of bridge on U.S. Highway 283, 1.6 mi (2.6 km) north of Norton.	1.02	1957-77	5-25-77	11.97	140
06856100	West Creek near Talmo, Kans.	Lat 39°40'00", long 97°36'48", in NW¼NW¼ sec.36, T.4 S., R.3 W., Republic County, at downstream side of county highway bridge, 2.5 mi (4.0 km) southwest of Talmo. Published as "West Salt Creek" 1957-71.	42.0	1957-77	8-16-77	17.31	740
06856320	Elk Creek at Clyde, Kans.	Lat 39°35'40", long 97°23'49", in NW¼NE¼ sec.26, T.5 S., R.1 W., Cloud County, at downstream side of Chicago, Rock Island Railroad bridge in Clyde and 2.8 mi (4.5 km) upstream from mouth.	73	1970-77	8-23-77	7.67	490
06856800	Moll Creek near Green, Kans.	Lat 39°22'48", long 97°00'28", in NE¼NW¼ sec.8, T.8 S., R.4 E., Clay County, at downstream side of bridge on U.S. Highway 24, 3.3 mi (5.3 km) southwest of Green. Prior to July 15, 1965, at site 60 ft (18 m) upstream at same datum.	3.60	1957-77	8-23-77	17.86	1,000
06858700	North Fork Smoky Hill River tributary near Winona, Kans.	Lat 39°01'51", long 101°17'07", in NE¼NW¼ sec.11, T.12 S., R.36 W., Logan County, 600 ft (183 m) downstream from culvert on U.S. Highway 40, 3.0 mi (4.8 km) southwest of Winona. Prior to Apr. 15, 1958, at site 700 ft (213 m) upstream and datum 11.00 ft (3.35 m) higher. Apr. 15, 1958, to July 31, 1963, at culvert on U.S. Highway 40 at datum 10.0 ft (3.05 m) higher. Records for 1957-61 discredited. Station discontinued.	1.13	1957-77	8-22-77	11.77	500
06860500	Hackberry Creek near Gove, Kans.	Lat 38°57'15", long 100°29'05", in SW¼NE¼ sec.1, T.13 S., R.29 W., Gove County, near right bank at downstream side of bridge on State Highway 23, 0.5 mi (0.8 km) south of Gove.	426	1948-53‡, 1960-77	8-24-77	11.65	4,000
06863000	Smoky Hill River at Pfeifer, Kans.	Lat 38°42'51", long 99°09'10", in SW¼SW¼ sec.30, T.15 S., R.16 W., Ellis County, near right bank on downstream side of county highway bridge, 1.0 mi (1.6 km) northeast of Pfeifer.	6,033	1929-32‡, 1970-77	8- 6-77	3.08	300
06863400	Big Creek tributary near Ogallah, Kans.	Lat 38°56'00", long 99°44'33", in NW¼SW¼ sec.11, T.13 S., R.22 W., Trego County, at downstream side of bridge on State Highway 147, 4.0 mi (6.4 km) southwest of Ogallah.	4.81	1957-77	7-20-77	11.74	100

‡ Operated as a continuous-record gaging station.
c From floodmark.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft^3/s)
		Kansas River basin--continued					
06863700	Big Creek tributary near Hays, Kans.	Lat 38°51'08", long 99°14'48", in SE¼NE¼ sec.7, T.14 S., R.17 W., Ellis County, at downstream side of culvert on old U.S. Highway 40 at Toulon, 4.7 mi (7.6 km) southeast of Hays.	6.19	1957-77	1977	a	<16
06864300	Smoky Hill River tributary at Dorrance, Kans.	Lat 38°50'52", long 98°35'44", in NW¼SE¼ sec.12, T.14 S., R.12 W., Russell County, at downstream end of culvert on old U.S. Highway 40 at Dorrance.	5.38	1957-77	1977	a	<20
06864700	Spring Creek near Kanopolis, Kans.	Lat 38°44'23", long 98°10'07", in NW¼NW¼ sec.24, T.15 S., R.8 W., Ellsworth County, at downstream end of culvert on old U.S. Highway 40, 2.2 mi (3.5 km) northwest of Kanopolis.	9.84	1957-77	8-28-77	14.69	1,300
06866490	Dry Creek at Mentor, Kans.	Lat 38°44'11", long 97°36'46", in SW¼NW¼ sec.24, T.15 S., R.3 W., Saline County, near right bank at downstream side of bridge on U.S. Highway 81, 0.6 mi (1.0 km) southwest of Mentor and 1.7 mi (2.7 km) upstream from mouth.	37	1970-77	9- 1-77	15.34	(+)
06866800	Saline River tributary at Collyer, Kans.	Lat 39°02'46", long 100°07'36", in SW¼SW¼ sec.32, T.11 S., R.25 W., Trego County, at downstream side of county highway bridge, 0.7 mi (1.1 km) northwest of Collyer.	3.13	1957-77	5-23-77	11.21	100
06867800	Cedar Creek tributary near Bunker Hill, Kans.	Lat 38°56'03", long 98°42'45", in NW¼SE¼ sec.12, T.13 S., R.13 W., Russell County, above culvert on county highway, 4.5 mi (7.2 km) northwest of Bunker Hill. Station discontinued.	0.99	1957-77	8-25-77	10.59	120
06868300	Coon Creek tributary near Luray, Kans.	Lat 39°10'30", long 98°42'02", in NW¼NE¼ sec.19, T.10 S., R.12 W., Osborne County, at downstream side of county highway bridge, 4.4 mi (7.1 km) northwest of Luray.	6.53	1957-77	8-26-77	20.30	2,000
06868400	Wolf Creek near Lucas, Kans.	Lat 39°03'30", long 98°33'10", in NW¼NW¼ sec.33, T.11 S., R.11 W., Russell County, at downstream side of highway bridge, 1.2 mi (1.9 km) west of Lucas, 4.0 mi (6.4 km) upstream from East Fork, and 15 mi (24 km) upstream from mouth.	163	1960-71‡, 1972-77	8-26-77	c28.15	5,000
06868700	North Branch Spillman Creek near Ash Grove, Kans.	Lat 39°09'08", long 98°23'45", in NE¼SE¼ sec.26, T.10 S., R.10 W., Lincoln County, at downstream side of bridge on State Highway 181, 2.0 mi (3.2 km) upstream from mouth and 2.2 mi (3.5 km) west of Ash Grove. Station discontinued.	26.1	1962-71‡, 1972-77	8-23-77	9.12	650
06868900	Bullfoot Creek tributary near Lincoln, Kans.	Lat 38°58'27", long 98°09'03", in SW¼SW¼ sec.30, T.12 S., R.7 W., Lincoln County, at downstream side of bridge on State Highway 14, 4.6 mi (7.4 km) south of Lincoln. Published as "Elkhorn Creek tributary" 1957-70.	2.64	1957-77	8-28-77	12.97	100
06869950	Mulberry Creek near Salina, Kans.	Lat 38°50'40", long 97°40'05", in SE¼SE¼ sec.8, T.14 S., R.3 W., Saline County, at left downstream pier of bridge on county highway, 2.0 mi (3.2 km) downstream from Spring Creek, 2.0 mi (3.2 km) west of Salina and 9.0 mi (14 km) upstream from mouth.	250	1961-77	9- 1-77	21.12	2,000

‡ Operated as a continuous-record gaging station.
(+) Discharge not determined.
a Peak did not reach bottom of pipe.
c From floodmark.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Kansas River basin--continued					
06872100	Middle Cedar Creek at Kensington, Kans.	Lat 39°45'21", long 99°02'04", in NE¼NE¼ sec.32, T.3 S., R.15 W., Smith County, at downstream side of bridge on old U.S. Highway 36, 0.5 mi (0.8 km) south of Kensington. Station discontinued.	58.9	1957-77	8-16-77	16.29	630
06872600	Oak Creek at Bellaire, Kans.	Lat 39°47'54", long 98°40'00", in NW¼NW¼ sec.15, T.3 S., R.12 W., Smith County, at downstream side of bridge at Bellaire. Prior to Sept. 8, 1965, at same site at datum 2.18 ft (0.66 m) lower.	4.75	1957-77	5- 3-77	13.09	45
06873300	Ash Creek tributary near Stockton, Kans.	Lat 39°26'15", long 99°22'16", in SE¼SW¼ sec.18, T.7 S., R.18 W., Rooks County, at upstream end of culvert on old U.S. Highway 24, 5.3 mi (8.5 km) west of Stockton.	0.89	1957-77	8- 6-77	c11.2	80
06873800	Kill Creek tributary near Bloomington, Kans.	Lat 39°23'58", long 98°50'26", in NE¼SE¼ sec.35, T.7 S., R.14 W., Osborne County, at upstream end of culvert on county highway, 4.8 mi (7.7 km) southwest of Bloomington. Station discontinued.	1.45	1957-77	8-23-77	14.57	370
06874500	East Limestone Creek near Ionia, Kans.	Lat 39°41'52", long 98°20'19", in NE¼NW¼ sec.21, T.4 S., R.9 W., Jewell County, at downstream side of county highway bridge, 2.5 mi (4.0 km) northeast of Ionia. Prior to Oct. 1, 1956, at same site and datum 6.2 ft (1.9 m) higher.	25.6	1934-38‡, 1957-77	8-16-77	15.53	350
06875800	Limestone Creek near Glen Elder, Kans.	Lat 39°32'18", long 98°18'58", in NE¼NW¼NW¼ sec.15, T.6 S., R.9 W., Mitchell County, 150 ft (46 m) downstream from highway bridge, 2.0 mi (3.2 km) north of Glen Elder, and 7.4 mi (11.9 km) upstream from mouth.	210	1965-71‡, 1972-77	9- 2-77	18.92	1,700
06876200	Middle Pipe Creek near Miltonvale, Kans.	Lat 39°21'00", long 97°34'08", in NE¼NW¼ sec.20, T.8 S., R.2 W., Cloud County, at downstream side of county highway bridge, 6.0 mi (9.6 km) west of Miltonvale. Station discontinued.	10.2	1957-77	6-17-77	16.13	330
06877120	Mud Creek at Abilene, Kans.	Lat 38°55'47", long 97°13'39", in NE¼NE¼ sec.17, T.13 S., R.2 E., Dickinson County, at downstream side of bridge on old U.S. Highway 40 on north edge of Abilene.	87	1970-77	5-30-77	13.23	4,000
06877200	West Turkey Creek near Elmo, Kans.	Lat 38°40'04", long 97°10'18", in SE¼SE¼ sec.11, T.16 S., R.2 E., Dickinson County, at downstream end of county highway bridge, 3.0 mi (4.8 km) southeast of Elmo. Published as "East Turkey Creek" 1957-70. Station discontinued.	26.6	1957-77	5-30-77	16.53	410
06877400	Turkey Creek tributary near Elmo, Kans.	Lat 38°40'57", long 97°11'04", in SW¼SW¼ sec.2, T.16 S., R.2 E., Dickinson County, at downstream end of bridge on State Highway 4, 2.3 mi (3.7 km) east of Elmo. Published as "East Turkey Creek tributary" 1957-70. Station discontinued.	2.48	1957-77	8-28-77	11.46	70
06877500	Turkey Creek near Abilene, Kans.	Lat 38°48'22", long 97°10'53", in W½ sec.26, T.14 S., R.2 E., Dickinson County, at downstream side of bridge immediately below mouth of West Branch Turkey Creek, 8.0 mi (13 km) south of Abilene.	143	1958-65‡, 1966-77	5-30-77	18.99	2,000

‡ Operated as a continuous-record gaging station.
c From floodmark.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		Kansas River basin--continued					
06879200	Clark Creek near Junction City, Kans.	Lat 39°00'28", long 96°44'20", in W½ sec.14, T.12 S., R.6 E., Geary County, at upstream side of bridge on State Highway 57, 5.0 mi (8.0 km) southeast of Junction City, 7.5 mi (12.1 km) upstream from Humboldt Creek.	200	1957-65‡, 1966-77	5-30-77	13.80	4,000
06879700	Wildcat Creek at Riley, Kans.	Lat 39°17'34", long 96°49'50", in SW¼SW¼ sec.1, T.9 S., R.5 E., Riley County, at downstream side of bridge on U.S. Highway 77 at Riley. Published as "Wild Cat Creek" 1957-64. Station discontinued.	14.0	1957-77	8-23-77	18.00	1,400
06879815	Wildcat Creek at Manhattan, Kans.	Lat 39°11'05", long 96°36'37", in NW¼SE¼NE¼ sec.14, T.10 S., R.7 E., Riley County, on downstream side of bridge on State Highway 113 in Manhattan, and 5.5 miles above mouth.	74	1974-77	6-24-75 5- 6-76 6-18-77	15.90 18.70 25.30	e2,300 e3,800 8,600
06884100	Mulberry Creek tributary near Haddam, Kans.	Lat 39°48'49", long 97°17'56", in NE¼NE¼ sec.10, T.3 S., R.1 E., Washington County, above culvert on U.S. Highway 36, 3.0 mi (4.8 km) south of Haddam. Published as "Mill Creek tributary" 1957-71.	1.64	1957-77	5-21-77	14.08	320
06884300	Mill Creek tributary near Washington, Kans.	Lat 39°48'48", long 97°00'30", in SW¼SW¼ sec.5, T.3 S., R.4 E., Washington County, at downstream end of culvert on U.S. Highway 36, 2.2 mi (3.5 km) east of Washington.	3.20	1957-77	5-21-77	15.03	520
06884900	Robidoux Creek at Beattie, Kans.	Lat 39°51'48", long 96°25'47", in SW¼NE¼ sec.20, T.2 S., R.9 E., Marshall County, at downstream side of county highway bridge, 0.8 mi (1.3 km) northwest of Beattie.	40.0	1957-77	9-12-77	22.22	(+)
06886500	Fancy Creek at Winkler, Kans.	Lat 39°28'20", long 96°49'55", in NW¼NE¼SE¼ sec.2, T.7 S., R.5 E., Riley County, at downstream side of county highway bridge, 0.2 mi (0.3 km) downstream from Otter Creek, 0.4 mi (0.6 km) south of Winkler, and at mile 13.2 (21.2 km).	174	1953-71‡, 1972-77	9-13-77	16.20	6,400
06887200	Cedar Creek near Manhattan, Kans.	Lat 39°15'31", long 96°33'48", in NE¼NE¼ sec.19, T.9 S., R.8 E., Pottawatomie County, at downstream side of county highway bridge, 5.5 mi (8.8 km) north of Manhattan.	13.4	1957-77	5-20-77	21.00	5,200
06887600	Kansas River tributary near Wamego, Kans.	Lat 39°10'28", long 96°15'45", in SE¼SE¼ sec.14, T.10 S., R.10 E., Wabaunsee County, at upstream end of culvert on county highway, 3.0 mi (4.8 km) southeast of Wamego.	0.83	1951, 1957-77	6-18-77	17.18	700
06888000	Vermillion Creek near Wamego, Kans.	Lat 39°21'00", long 96°13'10", in NE¼NW¼NW¼ sec.20, T.8 S., R.11 E., Pottawatomie County, at highway bridge, 1.0 mi (1.6 km) upstream from Indian Creek, 14 mi (23 km) northeast of Wamego, and at mile 15.8 (25.4 km).	243	1936-46‡, 1954-72‡, 1972-77	6-22-77	27.67	9,000
06888030	Vermillion Creek near Louisville, Kans.	Lat 39°16'42", long 96°14'34", in NW¼SE¼SE¼ sec.12, T.9 S., R.10 E., Pottawatomie County, on left bank 1.3 mi (2.1 km) upstream from Adams Creek, 4.0 mi (6.4 km) northeast of Louisville.	297	1970-77	9-13-77	22.46	6,400
06888300	Rock Creek near Louisville, Kans.	Lat 39°15'53", long 96°22'47", on west line of SE¼ sec.14, T.9 S., R.9 E., Pottawatomie County, at downstream side of highway bridge, 4.0 mi (6.0 km) west of Louisville.	128	1958-65‡, 1966-77	9-13-77	28.40	6,100

‡ Operated as a continuous-record gaging station.
(+) Not determined.
e Not previously published.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft³/s)
		Kansas River basin--continued					
06888600	Dry Creek near Maple Hill, Kans.	Lat 39°03'06", long 96°01'14", in SE¼NE¼ sec.36, T.11 S., R.12 E., Wabaunsee County, at downstream side of county highway bridge, 2.1 mi (3.4 km) southeast of Maple Hill. Station discontinued.	15.6	1957-77	6-19-77	16.06	2,600
06888900	Blacksmith Creek tributary near Valencia, Kans.	Lat 39°01'20", long 95°50'06", in SW¼NW¼ sec.11, T.12 S., R.14 E., Shawnee County, at downstream side of county highway bridge, 4.3 mi (6.9 km) southeast of Valencia.	1.31	1957-77	9-12-77	13.47	1,300
06889550	Indian Creek near Topeka, Kans.	Lat 39°07'27", long 95°39'06", in SE¼SE¼NE¼ sec.5, T.11 S., R.16 E., Shawnee County, 3.0 mi (5.0 km) north of Topeka and 2.7 mi (4.3 km) upstream from Soldier Creek (new channel).	9.72	1970-77	6-21-77	13.88	1,300
06889600	South Branch Shunganunga Creek near Pauline, Kans.	Lat 38°58'44", long 95°42'35", in SE¼NE¼ sec.26, T.12 S., R.15 E., Shawnee County, at downstream side of county highway bridge, 1.7 mi (2.7 km) northwest of Pauline. Station discontinued.	3.84	1957-77	6-24-77	15.63	2,400
06889630	Shunganunga Creek at Topeka, Kans.	Lat 39°01'54", long 95°40'57", in SE¼SW¼ sec.6, T.12 S., R.16 E., Shawnee County, on downstream side of bridge on U.S. Highway 75, 700 ft (213 m) north of 21st Street in Topeka.	34	1970-77	6-19-77	14.59	3,000
06890000	Little Delaware River near Horton, Kans.	Lat 39°41'40", long 95°33'50", in NE¼NE¼NE¼ sec.24, T.4 S., R.16 E., Brown County, at downstream side of county bridge, 3.2 mi (5.1 km) northwest of Horton.	19	1955-60‡, 1963-64‡, 1977	9-12-77	18.45	1,530
06890096	Little Grasshopper Creek near Muscotah, Kans.	Lat 39°32'50", long 95°30'50", in SW¼NW¼NW¼ sec.10, T.6 S., R.17 E., Atchinson County, at upstream side of bridge on highway 0.3 mi (0.5 km) southeast of Muscotah.	52	1977	9-12-77	25.72	5,300
06890300	Spring Creek near Wetmore, Kans.	Lat 39°38'12", long 95°50'43", in NE¼NE¼ sec.9, T.5 S., R.14 E., Nemaha County, at upstream side of county highway bridge, 1.8 mi (2.9 km) northwest of Wetmore. Station discontinued.	21.0	1957-77	9-12-77	22.42	8,000
06890560	Rock Creek 6 miles north Meriden, Kans.	Lat 39°17'19", long 95°34'57", in SE¼SW¼ sec.1, T.9 S., R.16 E., Jefferson County, at downstream side of stone arch bridge on county road, 7.0 mi (11.3 km) northwest of Meriden. Station discontinued.	1.89	1964-77	9-12-77	11.86	340
06890700	Slough Creek tributary near Oskaloosa, Kans.	Lat 39°12'05", long 95°18'09", in NE¼NW¼ sec.9, T.10 S., R.19 E., Jefferson County, above culvert on State Highway 16, 1.1 mi (1.8 km) southeast of Oskaloosa. Station discontinued.	0.83	1957-77	9-12-77	11.22	25
06890800	Slough Creek near Oskaloosa, Kans.	Lat 39°13'25", long 95°20'12", in SW¼NE¼ sec.31, T.9 S., R.19 E., Jefferson County, at downstream side of bridge on State Highway 92, 1.3 mi (2.1 km) northwest of Oskaloosa. Station discontinued.	31.0	1957-77	9-12-77	17.73	7,000
06891050	Stone House Creek at Williamstown, Kans.	Lat 39°04'00", long 95°20'09", on east line sec.30, T.11 S., R.19 E., Jefferson County, at downstream side of bridge on U.S. Highway 24, 0.1 mi (0.2 km) north of Williamstown.	12.9	1963-77	9-12-77	8.62	2,500

‡ Operated as a continuous-record gaging station.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft³/s)
		Kansas River basin--continued					
06891650	Naismith Creek at Lawrence, Kans.	Lat 38°56'03", long 95°15'08", in NE¼NE¼SW¼ sec.12, T.13 S., R.19 E., Douglas County, at downstream side of 27th Street bridge in Lawrence, and 6.0 mi (9.7 km) above mouth.	1.54	1974-77	10-11-73 9-11-75 12-14-75 6-24-77	14.20 13.55 13.70 c15.8	f900 f370 f450 2,500
06892800	Turkey Creek at Merriam, Kans.	Lat 39°00'28", long 94°41'56", in SW¼SE¼NW¼ sec.13, T.12 S., R.24 E., Johnson County, on downstream side of bridge on 67th Street, at Merriam.	6.76	1974-77	9-12-77	21.65	5,300
06892940	Turkey Creek at Kansas City, Kans.	Lat 39°03'31", long 94°37'33", in SE¼SW¼SW¼ sec.27, T.11 S., R.25 E., Wyandotte County, on downstream side of bridge on State Highway 10, at Kansas City.	22.3	1974-77	6- 9-74 8-26-75 6-24-76 9-12-77	16.28 15.68 16.31 c25.2	e3,500 e3,100 e3,500 11,700
		Osage River basin					
06912300	Dragoon Creek tributary near Lyndon, Kans.	Lat 38°41'33", long 95°41'06", in NW¼NW¼ sec.6, T.16 S., R.16 E., Osage County, at downstream side of bridge on U.S. Highway 75, 5.8 mi (9.3 km) north of Lyndon.	3.76	1957-77	6-18-77	15.71	3,500
06913600	Rock Creek near Ottawa, Kans.	Lat 38°33'15", long 95°16'02", in SW¼SW¼ sec.24, T.17 S., R.19 E., Franklin County, at downstream side of bridge on U.S. Highway 59, 3.7 mi (6.0 km) south of Ottawa. Station discontinued.	10.2	1957-77	6-18-77	17.36	730
06913700	Middle Creek near Princeton, Kans.	Lat 38°28'39", long 95°15'08", in SE¼SE¼ sec.13, T.18 S., R.19 E., Franklin County, at downstream side of bridge on U.S. Highway 59, 1.3 mi (2.1 km) southeast of Princeton.	52.0	1957-77	6-19-77	22.13	4,200
06914250	South Fork Pottawatomie Creek tributary near Garnett, Kans.	Lat 38°14'00", long 95°14'52", in NW¼SE¼ sec.7, T.21 S., R.20 E., Anderson County, above culvert on U.S. Highway 59, 3.1 mi (5.0 km) south of Garnett.	0.35	1963-77	6-19-77	13.24	360
06914500	Pottawatomie Creek at Lane, Kans.	Lat 38°26'38", long 95°05'02", in SW¼NW¼ sec.34, T.18 S., R.21 E., Franklin County, at downstream side of highway bridge at Lane.	513	1929-32‡, 1961-77	6-20-77	27.85	21,000
06915100	Big Bull Creek at Paola, Kans.	Lat 38°34'36", long 94°53'44", in NW¼NE¼NW¼ sec.17, T.17 S., R.23 E., Miami County, on downstream side of bridge on county highway (extension of Peoria St.), 0.5 mi (0.8 km) west of Paola and 9.0 mi (14.5 km) upstream from mouth.	230	1970-77	6-22-77	18.14	7,100
06916700	Middle Creek near Kincaid, Kans.	Lat 38°03'24", long 95°11'15", in W½SW¼ sec.11, T.23 S., R.20 E., Anderson County, at downstream side of county highway bridge, 2.5 mi (4.0 km) southwest of Kincaid.	2.02	1957-77	6-19-77	14.65	700
06917100	Marmaton River tributary near Bronson, Kans.	Lat 37°54'20", long 95°05'43", in NW¼NW¼ sec.3, T.25 S., R.21 E., Allen County, at downstream side of culvert on U.S. Highway 54 and 1.5 mi (2.4 km) northwest of Bronson. Prior to Oct. 1, 1967, at site 50 ft (15 m) downstream at same datum.	0.88	1957-77	6-22-77	13.07	190
06917400	Marmaton River tributary near Fort Scott, Kans.	Lat 37°47'26", long 94°47'47", in SW¼SW¼ sec.9, T.26 S., R.24 E., Bourbon County, at downstream side of county highway bridge, 6.0 mi (10 km) southwest of Fort Scott.	2.80	1957-77	6-22-77	14.76	1,200

‡ Operated as a continuous-record gaging station.
c From floodmark.
e Not previously published.
f Corrected.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Arkansas River basin					
07138600	Whitewoman Creek tributary near Selkirk, Kans.	Lat 38°31'30", long 101°37'16", in SW¼SW¼ sec.34, T.17 S., R.39 W., Greeley County, at downstream side of county highway bridge, 5.6 mi (9.0 km) northwest of Selkirk.	38.0 (7.89)	1957-77	8-11-77	11.29	220
07138800	Lion Creek tributary near Modoc, Kans.	Lat 38°28'48", long 101°01'00", in NW¼NE¼ sec.22, T.18 S., R.34 W., Scott County, below culvert on State Highway 96, 1.2 mi (1.9 km) southeast of Modoc. Station discontinued.	7.00 (1.19)	1957-77	8- 7-77	11.71	170
07139700	Arkansas River tributary near Dodge City, Kans.	Lat 37°42'52", long 100°00'53", in SE¼NE¼ sec.11, T.27 S., R.25 W., Ford County, at downstream side of culvert on U.S. Highway 283, 2.6 mi (4.2 km) south of Dodge City. Prior to Mar. 1, 1959, above culvert 175 ft (53 m) north of present site and at same datum. Records for 1957-58 discredited.	8.66	1957-77	8-19-77	14.47	530
07140300	Whitewoman Creek near Bellefont, Kans.	Lat 37°55'26", long 99°38'31", in SW¼NW¼ sec.33, T.24 S., R.21 W., Hodgeman County, at downstream side of county highway bridge, 3.5 mi (5.6 km) northeast of Bellefont.	14.0	1957-77	8-11-77	11.87	85
07140600	Pawnee River tributary near Kalvesta, Kans.	Lat 38°03'42", long 100°21'00", in S½SW¼ sec.12, T.23 S., R.28 W., Finney County, at downstream side of bridge on U.S. Highway 156, 3.4 mi (5.5 km) west of Kalvesta.	6.09	1957-77	8- 6-77	10.76	150
07141400	South Fork Walnut Creek tributary near Dighton, Kans.	Lat 38°28'58", long 100°24'54", in SE¼SE¼ sec.16, T.18 S., R.28 W., Lane County, at culvert on State Highway 96, 2.8 mi (4.5 km) east of Dighton. Until Sept. 6, 1958, at downstream side of existing culvert at same site and datum 0.42 ft (0.13 m) higher. Until Sept. 30, 1965, at downstream side of present culvert and same datum. Presently 10 ft (3 m) upstream from present retaining wall upstream from present culvert. Station discontinued.	0.81	1957-77	8- 5-77	12.91	95
07141600	Long Branch Creek near Ness City, Kans.	Lat 38°27'01", long 99°52'50", in NE¼NE¼ sec.32, T.18 S., R.23 W., Ness County, below bridge on State Highway 96, 1.2 mi (1.9 km) east of Ness City.	28.0	1957-77	1977	a	<5
07141800	Otter Creek near Rush Center, Kans.	Lat 38°24'16", long 99°18'26", in NW¼NW¼ sec.15, T.19 S., R.18 W., Rush County, at downstream side of bridge on U.S. Highway 183, 4.3 mi (6.9 km) south of Rush Center. Prior to Oct. 1, 1965, at site 100 ft (30 m) downstream at present datum.	17.0	1957-77	5-29-77	13.68	240
07142100	Rattlesnake Creek tributary near Mullinville, Kans.	Lat 37°35'11", long 99°25'17", in SE¼SW¼ sec.20, T.28 S., R.19 W., Kiowa County, at downstream end of culvert on U.S. Highway 54, 2.9 mi (4.7 km) east of Mullinville.	10.3	1957-77	5-23-77	13.57	2,000
07142500	Spring Creek near Dillwyn, Kans.	Lat 37°57'24", long 98°50'27", in SE¼SE¼ sec.15, T.24 S., R.14 W., Stafford County, at downstream side of bridge on U.S. Highway 50, 2.2 mi (3.5 km) southeast of Dillwyn. Station discontinued.	14.3	1957-77	5-21-77	13.22	470
07142700	Salt Creek near Partridge, Kans.	Lat 38°02'22", long 98°05'13", in SW¼NW¼ sec.22, T.23 S., R.7 W., Reno County, at downstream side of county highway bridge, 5.0 mi (8.0 km) north of Partridge.	85.0 (72.0)	1957-77	8-11-77	18.64	2,500

a Peak stage did not reach bottom of pipe.

Note.--Figures of drainage are in parentheses show approximate contributing area included in total area.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Arkansas River basin--continued					
07143100	Little Cheyenne Creek tributary near Claflin, Kans.	Lat 38°27'25", long 98°32'08", in NE¼SE¼ sec.28, T.18 S., R.11 W., Barton County, at culvert on county highway, 4.7 mi (7.7 km) south of Claflin. Published as "Cheyenne Creek tributary" 1957-70.	1.48	1957-77	8-28-77	11.84	100
07143200	Plum Creek near Holyrood, Kans.	Lat 38°35'53", long 98°25'27", in SW¼SW¼ sec.3, T.17 S., R.10 W., Ellsworth County, at downstream side of county highway bridge, 1.2 mi (1.9 km) northwest of Holyrood. Station discontinued.	19.0	1957-77	8-28-77	15.15	490
07143500	Little Arkansas River near Geneseo, Kans.	Lat 38°27'24", long 98°05'24", in NW¼SW¼ sec.27, T.18 S., R.7 W., Rice County, at downstream side of county highway bridge, 5.5 mi (8.8 km) southeast of Geneseo. Station discontinued.	25.0	1957-77	5-21-77	21.08	1,300
07143600	Little Arkansas River near Little River, Kans.	Lat 38°24'50", long 98°01'00", in NW¼SW¼ sec.8, T.19 S., R.6 W., Rice County, at downstream side of county highway bridge, and 1.0 mi (1.6 km) northwest of Little River.	71	1960-71‡, 1972-77	6-25-77	16.80	1,000
07144900	South Fork Ninnescah River tributary near Pratt, Kans.	Lat 38°40'30", long 98°43'23", NE¼NE¼ sec.27, T.27 S., R.13 W., Pratt County, at downstream end of culvert on county highway, 2.4 mi (3.9 km) northeast of Pratt.	1.48	1957-77	8-28-77	14.02	450
07145300	Clear Creek near Garden Plain, Kans.	Lat 37°39'48", long 97°39'22", in NE¼NW¼ sec.33, T.27 S., R.3 W., Sedgwick County, at downstream side of bridge on U.S. Highway 54, 1.5 mi (2.4 km) northeast of Garden Plain.	5.03	1957-77	9- 1-77	14.45	1,000
07145800	Antelope Creek tributary near Dalton, Kans.	Lat 37°16'34", long 97°17'01", in SW¼SE¼ sec.11, T.32 S., R.1 E., Sumner County, upstream from culvert on U.S. Highway 160, 0.8 mi (1.3 km) northwest of Dalton. Published as "Avon Creek tributary" 1957-70.	0.41	1957-77	5-21-77	13.13	90
07146700	West Branch Walnut River tributary near DeGraff, Kans.	Lat 37°57'19", long 96°51'04", in NE¼NW¼ sec.23, T.24 S., R.5 E., Butler County, at downstream side of county highway bridge, 2.0 mi (3.2 km) southeast of DeGraff. Station discontinued.	11.0	1957-77	5-21-77	12.43	370
07147020	Whitewater River tributary near Towanda, Kans.	Lat 37°51'03", long 97°03'37", in NE¼NE¼ sec.26, T.25 S., R.3 E., Butler County, at culvert on county highway, 5.0 mi (8.0 km) northwest of Towanda.	0.17	1963-77	8-11-77	12.62	70
07147200	Dry Creek tributary near Augusta, Kans.	Lat 37°40'47", long 97°01'50", in S½SE¼ sec.19, T.27 S., R.4 E., Butler County, at downstream end of culvert on U.S. Highway 54, 2.8 mi (4.5 km) west of Augusta. Published as "Indianola Creek tributary" 1957-63. Station discontinued.	0.90	1957-77	4-13-77	10.29	100
07147990	Cedar Creek tributary near Cambridge, Kans.	Lat 37°19'19", long 96°37'33", on east line sec.26, T.31 S., R.7 E., Cowley County, at downstream side of bridge on U.S. Highway 160, 0.5 mi (0.8 km) upstream from Cedar Creek and 2.1 mi (3.4 km) northeast of Cambridge. Published as "Grouse Creek tributary" 1961-63.	2.41	1961-77	6-21-77	14.42	3,000

‡ Operated as a continuous-record gaging station.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		Arkansas River basin--continued					
07148100	Grouse Creek near Dexter, Kans.	Lat 37°13'38", long 96°42'44", in NW¼NW¼ sec.31, T.32 S., R.7 E., Cowley County, on right bank at downstream side of county highway bridge, 3.2 mi (5.1 km) north of Dexter.	170	1960-77	6-22-77	29.98	37,000
07148700	Dog Creek near Deerhead, Kans.	Lat 37°16'50", long 98°52'24", in NW¼NW¼ sec.8, T.32 S., R.14 W., Barber County, above culvert on U.S. Highway 160, 3.5 mi (5.6 km) northeast of Deerhead. Station discontinued.	5.31	1957-77	5-23-77	12.01	110
07148800	Medicine Lodge River tributary near Medicine Lodge, Kans.	Lat 37°18'42", long 98°35'20", in NW¼NE¼ sec.35, T.31 S., R.12 W., Barber County, on right bank at downstream side of county highway bridge, 2.8 mi (4.5 km) northwest of Medicine Lodge. Prior to June 23, 1960, at site 0.5 mi (0.8 km) downstream and at datum 3.86 ft (1.18 m) lower. Station discontinued.	2.04	1957-77	5-23-77	15.01	650
07151600	Rush Creek near Harper, Kans.	Lat 37°15'12", long 98°04'47", in NE¼NE¼ sec.21, T.32 S., R.7 W., Harper County, at downstream side of county highway bridge, 3.5 mi (5.6 km) southwest of Harper.	12.0	1957-77	5-23-77	16.82	4,500
07155900	North Fork Cimarron River tributary near Elkhart, Kans.	Lat 37°11'27", long 101°53'54", in NW¼SW¼ sec.9, T.33 S., R.42 W., Morton County, at downstream side of culvert on State Highway 27, 13.0 mi (20.9 km) north of Elkhart.	75 (10.0)	1957-77	4-28-76 9-19-77	fc17.5 14.64	e10,000 2,500
07156000	North Fork Cimarron River tributary near Richfield, Kans.	Lat 37°18'36", long 101°46'18", in SW¼NW¼ sec.34, T.31 S., R.41 W., Morton County, at downstream side of bridge on State Highway 27, 3.3 mi (5.3 km) northeast of Richfield. Station discontinued.	103 (58.9)	1957-77	4-27-76 5-18-77	c21.1 16.66	e11,000 1,900
07156600	Cimarron River tributary near Moscow, Kans.	Lat 37°20'07", long 101°03'00", in NW¼SW¼ sec.20, T.31 S., R.34 W., Seward County, at downstream side of county highway bridge, 8.8 mi (14.2 km) northeast of Moscow.	13.0 (8.00)	1957-77	5-10-77	12.73	900
07156700	Cimarron River tributary near Satanta, Kans.	Lat 37°16'15", long 100°55'36", in NW¼NE¼ sec.17, T.32 S., R.33 W., Seward County, at downstream side of bridge on county highway, 12.0 mi (19.3 km) southeast of Satanta.	2.41	1957-77	5-10-77	13.23	940
07157100	Crooked Creek near Copeland, Kans.	Lat 37°33'55", long 100°33'15", in SE¼SW¼ sec.36, T.28 S., R.30 W., Gray County, at downstream side of culvert on U.S. Highway 56, 4.4 mi (7.1 km) northeast of Copeland. Prior to Sept. 15, 1960, at downstream side of bridge, just downstream of present site and at same datum.	44.0	1957-77	6-25-77	15.54	1,100
07157400	Crooked Creek tributary at Meade, Kans.	Lat 37°17'47", long 100°20'22", in NE¼NW¼ sec.2, T.32 S., R.28 W., Meade County, at downstream side of culvert on State Highway 23, 0.8 mi (1.3 km) north of Meade.	6.57	1957-77	4-20-77	12.75	400
07157700	Kiger Creek near Ashland, Kans.	Lat 37°11'36", long 99°54'48", in SW¼SE¼ sec.3, T.33 S., R.24 W., Clark County, above bridge on U.S. Highway 160, 8.2 mi (13.2 km) west of Ashland.	34.0	1957-77	9-16-77	13.70	700
07166200	Sandy Creek near Yates Center, Kans.	Lat 37°50'47", long 95°50'07", in SE¼NE¼ sec.26, T.25 S., R.14 E., Woodson County, at downstream side of bridge on U.S. Highway 54, 6.0 mi (9.7 km) southwest of Yates Center.	6.80	1957-77	6-19-77	14.13	450

c From floodmark.
e Not previously published.
f Corrected.
Note.--Figures of drainage area in parentheses show approximate contributing area included in total area.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum: Date	Annual maximum: Gage height (feet)	Annual maximum: Discharge (ft^3/s)
		Arkansas River basin--continued					
07169200	Salt Creek near Severy, Kans.	Lat 37°37'12", long 96°15'07", in NW¼NW¼ sec.18, T.28 S., R.11 E., Greenwood County, at downstream side of bridge on State Highway 99, 1.5 mi (2.4 km) west of Severy. Station discontinued.	7.59	1957-77	6-22-77	18.48	3,000
07169700	Snake Creek near Howard, Kans.	Lat 37°32'28", long 96°14'24", in NW¼SE¼ sec.7, T.29 S., R.11 E., Elk County, at downstream end of culvert on county highway, 5.0 mi (8.0 km) northeast of Howard. Station discontinued.	1.84	1957-77	6-22-77	16.41	1,000
07170600	Cherry Creek near Cherryvale, Kans.	Lat 37°17'46", long 95°32'51", in SE¼SW¼ sec.33, T.31 S., R.17 E., Montgomery County, at downstream side of bridge on U.S. Highway 169, 2.0 mi (3.2 km) northeast of Cherryvale. Station discontinued.	15.0	1957-77	6-21-77	19.90	5,000
07170800	Mud Creek near Mound Valley, Kans.	Lat 37°11'38", long 95°26'52", in NW¼NW¼ sec.9, T.33 S., R.18 E., Labette County, at downstream side of bridge on State Highway 96, 2.6 mi (4.2 km) southwest of Mound Valley.	4.22	1957-77	6-22-77	17.20	2,000
07171700	Spring Branch near Cedar Vale, Kans.	Lat 37°06'48", long 96°27'29", in NW¼NE¼ sec.7, T.34 S., R.9 E., Chautauqua County, at downstream side of bridge on U.S. Highway 166, 2.3 mi (3.7 km) northeast of Cedar Vale. Published as "Spring Creek tributary near Cedar Vale, Kans." 1957-60, "Spring Creek near Cedar Vale" 1961-65.	3.10	1957-77	8-15-77	14.34	2,900
07171800	Cedar Creek tributary near Hooser, Kans.	Lat 37°06'27", long 96°34'27", in SW¼NE¼ sec.7, T.34 S., R.8 E., Cowley County, above culvert on U.S. Highway 166, 3.9 mi (6.3 km) southeast of Hooser.	0.56	1957-77	5-21-77	13.47	340
07171900	Grant Creek near Wauneta, Kans.	Lat 37°06'34", long 96°23'55", in SE¼NE¼ sec.10, T.34 S., R.9 E., Chautauqua County, at upstream side of county highway bridge, 1.1 mi (1.8 km) southwest of Wauneta. Station discontinued.	20.0	1957-77	6-22-77	18.89	6,000
07179600	Four Mile Creek near Council Grove, Kans.	Lat 38°35'59", long 96°29'54", in NW¼SW¼ sec.2, T.17 S., R.8 E., Morris County, at downstream side of bridge on State Highways 13 and 57, 3.3 mi (5.3 km) south of Council Grove and at mile 4.4 (7.1 km). Station discontinued.	55.0	1963-71‡, 1972-77	5-20-77	12.44	3,300
07180300	Spring Creek tributary near Florence, Kans.	Lat 38°11'00", long 96°54'49", in W½NW¼ sec.32, T.21 S., R.5 E., Marion County, above culvert on U.S. Highway 77, 4.1 mi (6.6 km) southeast of Florence.	0.55	1957-77	6-17-77	14.54	260
07181500	Middle Creek near Elmdale, Kans.	Lat 38°23'36", long 96°43'04", in SE¼SW¼ sec.13, T.19 S., R.6 E., Chase County, at downstream side of county highway bridge, 4.0 mi (6.4 km) northwest of Elmdale and at mile 8.2 (13.2 km).	92.0	1939-50‡, 1960-77	6-20-77	18.48	22,000
07182520	Rock Creek at Burlington, Kans.	Lat 38°11'46", long 95°45'24", in NW¼NW¼ sec.27, T.21 S., R.15 E., Coffey County, at downstream side of culvert on county highway at west city limit of Burlington. Prior to Mar. 18, 1960, at downstream side of county highway bridge (now removed) at the same site and datum. Station discontinued.	8.27	1957-77	6-19-77	18.71	1,200

‡ Operated as a continuous-record gaging station.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		Arkansas River basin--continued					
07182600	North Big Creek near Burlington, Kans.	Lat 38°06'37", long 95°45'26", in NW¼NW¼ sec.27, T.22 S., R.15 E., Coffey County, at downstream side of county highway bridge, 5.9 mi (9.5 km) southwest of Burlington.	46.0	1957-77	6-19-77	17.85	2,300
07183800	Limestone Creek near Beulah, Kans.	Lat 37°24'12", long 94°53'16", in NE¼SE¼ sec.28, T.30 S., R.23 E., Crawford County, at downstream side of county highway bridge, 4.0 mi (6.4 km) southwest of Beulah.	12.0	1957-77	6-20-77	c18.6	3,400
07184070	Deer Creek near Hallowell Kans.	Lat 37°13'50", long 94°59'41", in NE¼NE¼SE¼ sec.28, T.32. S., R.22 E., Cherokee County, at downstream side of county road bridge, 3.6 mi (5.8 km) north of Hallowell.	7.0	1977	6-22-77	13.51	215
07184220	Cherry Creek near West Mineral, Kans.	Lat 37°14'14", long 94°55'04", in NE¼NW¼NW¼ sec.29, T.32 S., R.23 E., Cherokee County, at downstream side of county road bridge 3.0 mi (4.8 km) south of West Mineral.	27.0	1977	6-20-77	19.54	1,690
07184240	Little Cherry Creek near West Mineral, Kans.	Lat 37°13'31", long 94°50'13", in NW¼NE¼NW¼ sec.32, T.32 S., R.23 E., Cherokee County, at downstream side of county road bridge, 4.1 mi (6.6 km) south of West Mineral.	34.0	1977	6-22-77	17.83	1,880
07184500	Labette Creek near Oswego, Kans.	Lat 37°11'30", long 95°11'30", in NW¼NW¼ sec.11, T.33 S., R.20 E., Labette County, at downstream side of bridge on U.S. Highway 96, 2.0 mi (3.2 km) upstream from St. Louis - San Francisco Railway bridge, 5.0 mi (8.0 km) northwest of Oswego and at mile 18.8 (30.2 km).	211	1939-45‡, 1961-77	6-22-77	19.89	11,000
07184600	Fly Creek near Faulkner, Kans.	Lat 37°06'15", long 94°56'21", in NW¼NW¼ sec.7, T.34 S., R.23 E., Cherokee County, at upstream side of county highway bridge, 3.8 mi (6.1 km) east of Faulkner. Station discontinued.	27.0	1957-77	6-22-77	22.54	4,000
07186010	Second Cow Creek at Pittsburg, Kans.	Lat 37°23'49", long 94°44'30", in SW¼SW¼SW¼ sec.25, T.30 S., R.24 E., Crawford County, at downstream side of county road bridge, 2.2 mi (3.5 km) southwest of Pittsburg.	60.0	1977	6-20-77	22.70	2,700
07186050	Brush Creek near Weir, Kans.	Lat 37°18'32", long 94°42'19", in NE¼NE¼NE¼ sec.31, T.31 S., R.25 E., Cherokee County, at upstream side of U.S. 69 highway bridge, 4.0 mi (6.4 km) east of Weir.	30.0	1977	6-20-77	20.25	1,680

‡ Operated as a continuous-record gaging station.
c From floodmark.

Flood hydrograph stations

The following table contains stage and discharge for indicated times at flood hydrograph stations. Records of stage above the elevation of the base discharge are obtained from a water-stage recorder. The base is selected so that an average of about three floods a year can be presented. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak discharge or by current meter. The maximum discharge for each water year is given although it may not be above the base.

KANSAS RIVER BASIN

06870300 GYPSUM CREEK NEAR GYPSUM, KS

LOCATION.--Lat 38°39'11", long 97°25'10", in SE¼SE¼SW¼ sec.15, T.16 S., R.1 W., Saline County, 3.5 mi (5.6 km) south of Gypsum, and 22.7 mi (36.5 km) upstream from mouth. DRAINAGE AREA.--120 mi^2 (311 km^2), approximately. PERIOD OF RECORD.--October 1954 to September 1971, continuous recoro. October 1971 to current year, flood hydrograph record.

GAGE HEIGHT, IN FEET, AND DISCHARGE, IN CUBIC FEET PER SECOND, AT INDICATED TIME, 1977 WATER YEAR

DATE	HOUR	GAGE HEIGHT	DIS-CHARGE
MAY 17	0300	12.91	521
	0400	13.56	613
	0500	14.03	686
	0700	14.67	818
	0900	14.89	872
	1100	15.32	996
	1200	15.40	1020
	1300	15.40	1020
	1400	15.26	978
	1500	14.87	868
	1600	14.14	708
	1700	13.17	555
	1800	12.04	434
MAY 21	0700	12.12	442
	0800	13.35	582
	0900	14.08	696
	1000	14.56	792
	1200	15.23	969
	1500	15.77	1130
	1700	15.97	1190
	1800	16.02	1210
	1900	16.00	1200
	2000	15.88	1160
	2200	15.14	942
	2300	14.49	778
	2400	13.63	624
MAY 22	0100	12.63	493
JUNE 13	1300	12.55	485
	1400	13.90	665
	1500	14.65	812
	1600	15.14	942
	1700	15.56	1070
	1800	15.96	1190
	1900	16.18	1270
	2000	16.34	1340
	2100	16.40	1360
	2200	16.35	1340
	2300	16.16	1260
	2400	15.83	1150
JUNE 14	0100	15.31	993
	0200	14.51	782
	0300	13.49	604
	0400	12.40	470
JUNE 19	0800	12.53	483
JUNE 19	0900	13.48	602
	1000	14.24	728
	1100	14.74	835
	1200	15.12	936
	1400	15.74	1120
	1500	16.04	1220
	1700	16.52	1410
	1800	16.61	1440
	1900	16.63	1450
	2100	16.18	1270
	2200	15.71	1110
	2300	14.99	898
	2400	13.87	660
JUNE 20	0100	12.59	489
JUNE 25	0600	13.02	533
	0700	13.76	644
	0800	14.22	724
	1000	14.80	850
	1100	15.01	903
	1200	15.13	939
	1300	15.05	915
	1400	14.90	875
	1500	14.53	786
	1600	13.93	670
	1700	13.15	[illegible]52
	1800	12.36	466
JULY 2	1000	14.30	740
	1100	15.35	1000
	1200	15.12	936
	1300	14.48	776
	1400	13.62	623
	1500	12.65	495
	1800	12.19	449
	1900	12.84	514
	2000	13.44	596
	2100	13.95	672
	2200	14.37	754
	2400	14.89	872
JULY 3	0100	15.07	921
	0200	15.12	936
	0300	15.06	918
	0400	14.75	837
	0500	14.15	710
	0600	13.30	575
	0700	12.30	460

Peak discharges above base of 650 ft^3/s (18.4 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
May 17	1200	1,020	28.9	15.40	4.694
May 21	1800	1,210	34.3	16.02	4.883
June 13	2100	1,360	38.5	16.40	4.999
June 19	1900	* 1,450	41.1	16.63	5.069
June 25	1200	939	26.6	15.13	4.612
July 2	1100	1,000	28.3	15.35	4.679
July 3	0200	936	26.5	15.12	4.609

ARKANSAS RIVER BASIN

07139000 ARKANSAS RIVER AT GARDEN CITY, KS

LOCATION.--Lat 37°57'21", long 100°52'37", in NW¼SE¼NW¼ sec.19, T.24 S., R.32 W., Finney County, at downstream side of bridge on U.S. Highway 83, 0.5 mi (0.8 km) south of Garden City, and at mile 1,024.2 (1,647.9 km). DRAINAGE AREA.--27,071 mi^2 (70,114 km^2), of which about 2,368 mi^2 (6,133 km^2) is probably noncontributing. PERIOD OF RECORD.--June 1922 to June 1970, continuous record. July 1970 to current year, flood hydrograph record. CURRENT YEAR MAXIMUM.--Discharge, 140 ft^3/s (3.96 m^3/s) Apr. 13, gage height, 4.8 ft (1.46 m), from floodmark.

Peak discharge above base of 600 ft^3/s (17.0 m^3/s).--No peak above base.

Little Arkansas River seepage investigation--near Medora to below Buhler, KS

A series of discharge measurements was made on November 11, 1976, to study channel gains and losses on Little Arkansas River in McPherson, Reno, and Harvey Counties, Kansas. The reach extends from about 4 miles north of Medora to 5 miles east of the Reno-Harvey County line. The measurements were made during a period of constant base flow of the stream; for 12 days preceeding the investigation precipitation was insufficient to produce surface runoff. Transpiration was minimal as a result of several frosts in October and early November. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

Little Arkansas River mile	Stream	Location	Meas. disch. (ft^3/s)	Gain or loss	Water temp. (°C)	Sodium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)
81.8	Little Arkansas River.....	NW¼NW¼ sec.27, T.21 S., R.5 W., 3.75 miles northwest of Medora.....................	0.72	--	1.0	75.0	106	72.0	51.0
77.02	....do....	SE¼NW¼ sec.11, T.22 S., R.5 W., at State Highway 61, 0.5 miles northeast of Medora.....................	0.78	+0.06	1.0	70.0	104	66.0	60.0
75.12	....do....	NW¼NW¼ sec.13, T.22 S., R.5 W., 1.1 miles southeast of Medora.....................	0.97	+0.19	1.5	65.0	112	75.0	67.0
73.61	....do....	NE¼SE¼ sec.13, T.22 S., R.5 W., 2.1 miles southeast of Medora.....................	2.26	+1.29	2.0	175	306	407	531
72.21	....do....	NW¼NW¼ sec.20, T.22 S., R.4 W., 1.35 miles southwest of Buhler.....................	1.78	-0.48	3.0	180	320	428	530
70.71	....do....	NW¼SW¼ sec.21, T.22 S., R.4 W., 1.2 miles south of Buhler.....................	1.83	+0.05	4.0	151	272	346	456
68.77	....do....	SE¼SE¼ sec.21, T.22 S., R.4 W., 1.5 miles southeast of Buhler.....................	2.18	+0.35	4.5	136	232	245	305
66.95	....do....	SW¼SW¼ sec.26, T.22 S., R.4 W., 2.0 miles west of Reno-Harvey County line.......	1.95	-0.23	4.0	79.0	136	136	136
65.52	....do....	NW¼NW¼ sec.36, T.22 S., R.4 W., 1.0 miles west of Reno-Harvey County line.......	2.09	+0.14	3.5	75.0	128	115	114
64.32	....do....	SW¼NW¼ sec.31, T.22 S., R.3 W., on Reno-Harvey County line..................	2.30	+0.21	3.0	68.0	117	95.0	93.0
63.19	....do....	SE¼SE¼ sec.30, T.22 S., R.3 W., 0.9 miles east of Reno-Harvey County line.......	2.27	-0.03	2.0	66.0	112	91.0	83.0
61.54	....do....	NW¼NE¼ sec.29, T.22 S., R.3 W., 1.7 miles east of Reno-Harvey County line.......	2.12	-0.15	2.0	62.0	107	80.0	71.0
60.64	Blaze Fork	NW¼SW¼ sec.21, T.22 S., R.3 W., 0.25 miles above mouth.........................	0.004	--	1.0	--	--	33.0	--
58.23	Little Arkansas River.....	SE¼SE¼ sec.23, T.22 S., R.3 W., 4.0 miles east of Reno-Harvey County line.......	2.40	+0.28	1.5	58.0	107	73.0	65.0
56.50	....do....	NW¼NW¼ sec.25, T.22 S., R.3 W., 5.0 miles east of Reno-Harvey County line.......	2.47	+0.07	1.5	56.0	107	73.0	67.0
		Overall net gain or loss		+1.75					

Ninnescah River seepage investigation—west of Belle Plaine, KS to mouth

A series of discharge measurements was made on November 16-17, 1976, to study channel gains and losses on Ninnescah River in Sumner County, Kansas. The reach extends from about 5 miles northwest of Belle Plaine to 1.2 miles above the confluence with the Arkansas River. Streamflow is partially regulated by Cheney Reservoir; however, during the investigatory period releases from the reservoir averaged about 0.3 ft³/s. Thus the measurements were made during a period of constant base flow of the stream. For 17 days proceeding the investigation precipitation was insufficient to produce surface runoff. Transpiration had ended as a result of a killing frost in October. Indicated gains and losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

Ninnescah River mile	Stream	Location	Meas. disch. (ft³/s)	Gain or loss	Water temp. (°C)	Sodium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)
20.7	Ninnescah River.....	NW¼NW¼ sec.29, T.30 S., R.1 E., 0.9 mile west of U.S. Highway 81................	122	--	1.5	201	80.0	313	71.0
17.0	....do....	SW¼SE¼ sec.32, T.30 S., R.1 E., at U.S. Highway 81, 3.5 miles west of Belle Plaine..................	120	-2.0	1.5	196	78.0	291	670
15.5	....do....	NW¼SE¼ sec.4, T.31 S., R.1 E., 0.33 mile east of Kansas Turnpike............	122	+2.0	2.0	191	77.0	289	63.0
14.6	....do....	NE¼NE¼ sec.9, T.31 S., R.1 E., 1.2 miles southwest of Belle Plaine...............	126	+4.0	3.0	194	77.0	291	63.0
13.8	....do....	SW¼NE¼ sec.10, T.31 S., R.1 E., 1.9 miles southwest of Belle Plaine...............	131	+5.0	3.5	199	80.0	307	64.0
11.6	....do....	SW¼SW¼ sec.12, T.31 S., R.1 E., 2.0 miles south of Belle Plaine...............	130	-1.0	4.0	202	78.0	303	68.0
9.6	....do....	SW¼SW¼ sec.18, T.31 S., R.2 E., 3.0 miles southeast of Belle Plaine...............	132	+2.0	2.5	201	78.0	307	65.0
6.6	....do....	NW¼SW¼SW¼ sec.20, T.31 S., R.2 E., 4.5 miles southeast of Belle Plaine...............	133	+1.0	2.5	199	80.0	302	65.0
4.7	....do....	SE¼NW¼ sec.28, T.31 S., R.2 E., 5.7 miles southeast of Belle Plaine...............	130	-3.0	3.5	199	83.0	304	63.0
1.2	....do....	NW¼NE¼ sec.36, T.31 S., R.2 E., 7.8 miles southeast of Belle Plaine...............	141	+11.0	4.5	200	80.0	301	66.0
		Overall net gain or loss		+19.0					

Salt Creek seepage investigation--near Geuda Springs, KS

A series of discharge measurements was made on November 18, 1976, to study channel gains and losses on Salt Creek in Sumner County, Kansas. The reach extends from about 2 miles west of Geuda Springs to Geuda Springs. The measurements were made during a period of constant base flow of the stream; for 18 days preceeding the investigation precipitation was insufficient to produce surface runoff. Transpiration had ended as a result of a killing frost in October. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

Salt Creek mile	Stream	Location	Meas. disch. (ft^3/s)	Gain or loss	Water temp. (°C)	Sodium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)
4.1	Salt Creek	SW¼SW¼ sec.2, T.34 S., R.2 E., 2.0 miles west of Geuda Springs..............	0.10	--	2.0	201	628	390	1,600
2.5	Unnamed tributary.	SE¼SE¼ sec.2, T.34 S., R.2 E., 300 feet above mouth........................	0.06	--	2.5	410	860	1,440	1,510
2.0	Salt Creek	SE¼SW¼ sec.1, T.34 S., R.2 E., 0.5 mile west of Geuda Springs..............	0.32	+0.16	3.0	410	744	990	1,690
1.2	....do....	SE¼SE¼ sec.1, T.34 S., R.2 E., 0.25 mile north of Geuda Springs..............	0.46	+0.14	3.5	960	744	1,780	1,770
		Overall net gain or loss		+0.30					

Slate Creek seepage investigation--southeast of Wellington, KS to near the mouth

A series of discharge measurements was made on November 17, 1976, to study channel gains and losses on Slate Creek in Sumner County, Kansas. The reach extends from about 10 miles southeast of Wellington to 3.5 miles above the confluence with the Arkansas River. The measurements were made during a period of constant base flow of the stream; for 18 days preceeding the investigation precipitation was insufficient to produce surface runoff. Transpiration had ended as a result of a killing frost in October. Indicated gains or losses may be substantially in error as affected by small inaccuracies in open-channel measurements.

Slate Creek mile	Stream	Location	Meas. disch. (ft^3/s)	Gain or loss	Water temp. (°C)	Sodium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)
14.5	Slate Creek	NW¼SW¼ sec.8, T.33 S., R.2 E., 10.0 miles southeast of Wellington.................	3.73	--	2.5	71.0	91.0	78.0	87.0
11.6	....do.....	NE¼NW¼ sec.16, T.33 S., R.2 E., 11.5 miles southeast of Wellington.................	3.82	+0.09	2.5	340	149	500	314
9.4	Unnamed tributary..	SW¼SW¼ sec.15, T.33 S., R.2 E., 250 feet above mouth.........................	0.002	--	3.0	730	133	790	604
9.3	Slate Creek	NW¼NW¼ sec.22, T.33 S., R.2 E., 12.5 miles southeast of Wellington.................	4.58	+0.66	4.0	2,350	259	3,540	706
5.9	....do.....	NE¼SE¼ sec.23, T.33 S., R.2 E., 14.4 miles southeast of Wellington.................	4.08	-0.50	3.5	2,160	246	3,300	642
3.7	Unnamed tributary..	NE¼NW¼ sec.24, T.33 S., R.2 E., 200 feet above mouth...................	0.001	--	4.0	154	29.0	57.0	124
3.5	Slate Creek	NE¼SE¼NE¼ sec.24, T.33 S., R.2 E., 15.1 miles southeast of Wellington.................	4.41	+0.33	3.5	2,000	250	3,050	690
		Overall net gain or loss		+0.58					

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
ARKANSAS RIVER BASIN										
07183500 - NEOSHO R NR PARSONS, KS (LAT 37 10 39 LONG 095 06 37)										
APR , 1976 13...	95	560	7.6	17.5	27	10.2	13	72	14	27
07183800 - LIMESTONE C NR BEULAH, KS (LAT 37 26 12 LONG 094 53 16)										
APR , 1976 13...	.11	519	7.5	16.0	7	8.2	9	91	7.1	10
07184500 - NEOSHO R AT CHETOPA, KS (LAT 37 02 10 LONG 095 04 50)										
APR , 1976 13...	91	668	7.8	19.0	27	10.8	10	82	20	31
07187560 - SHOAL CREEK NEAR GALENA, KANSAS (LAT 37 02 31 LONG 094 38 34)										
APR , 1976 15...	--	--	--	--	3	--	4	--	--	--

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
07183500 - NEOSHO R NR PARSONS, KS (LAT 37 10 39 LONG 095 06 37)										
APR , 1976 13...	3.8	220	0	180	84	29	.3	29	.5	369
07183800 - LIMESTONE C NR BEULAH, KS (LAT 37 26 12 LONG 094 53 16)										
APR , 1976 13...	2.1	230	0	189	97	11	.3	.3	2.4	336
07184500 - NEOSHO R AT CHETOPA, KS (LAT 37 02 10 LONG 095 04 50)										
APR , 1976 13...	40	190	0	156	140	25	.3	.3	.8	454
07187560 - SHOAL CREEK NEAR GALENA, KANSAS (LAT 37 02 31 LONG 094 38 34)										
APR , 1976 15...	--	150	0	123	8.0	5.0	.1	--	--	--

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
07183500 - NEOSHO R NR PARSONS, KS (LAT 37 10 39 LONG 095 06 37)									
APR , 1976 13...	.50	94.6	.09	.00	.40	.10	.23	.32	.12
07183800 - LIMESTONE C NR BEULAH, KS (LAT 37 26 12 LONG 094 53 16)									
APR , 1976 13...	.46	.10	.16	.40	.70	.21	.20	.16	.09
07184500 - NEOSHO R AT CHETOPA, KS (LAT 37 02 10 LONG 095 04 50)									
APR , 1976 13...	.62	112	.25	.90	1.1	.22	.27	.40	.07
07187560 - SHOAL CREEK NEAR GALENA, KANSAS (LAT 37 02 31 LONG 094 38 34)									
APR , 1976 15...	--	--	.14	.00	.60	--	.04	.98	.60

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
ARKANSAS RIVER BASIN										
365956094510400 - TAR C AT TREECE, KS (LAT 36 59 56 LONG 094 51 04)										
APR , 1976 15...	.01	--	--	--	4	--	7	--	--	--
370225094442600 - WILLOW C AT BAXTER SPRINGS, KS (LAT 37 02 25 LONG 094 44 26)										
APR , 1976 15...	.01	--	--	--	5	--	26	--	--	--
370503094382200 - SHORT C AT GALENA, KS (LAT 37 05 03 LONG 094 38 22)										
APR , 1976 15...	10	--	--	--	40	--	11	--	--	--
370530095025900 - CHERRY C 3 MILES W OF FAULKNER, KS (LAT 37 05 30 LONG 095 02 59)										
APR , 1976 13...	3.9	1530	6.8	17.0	20	6.0	27	200	73	68
370621095024900 - CHERRY C 2 MILES W OF FAULKNER, KS (LAT 37 06 21 LONG 095 02 49)										
APR , 1976 13...	4.3	1540	7.5	17.0	16	7.4	13	210	76	70
370957095034400 - NEOSHO R 2 MILES E OF OSWEGO, KS (LAT 37 09 57 LONG 095 03 44)										
APR , 1976 13...	82	608	7.7	19.0	20	10.8	14	74	19	29
371222094573100 - CHERRY C 3 MILES NE OF HALLOWELL, KS (LAT 37 12 22 LONG 094 57 31)										
APR , 1976 13...	5.0	2000	6.6	13.0	5	7.1	8	240	90	70
371320094391100 - COW C NR LAWTON, KS (LAT 37 13 20 LONG 094 39 11)										
APR , 1976 14...	14	1300	6.7	18.5	9	9.5	16	130	63	65
371414094524100 - L CHERRY C 4 MILES SE OF WEST MINERAL, KS (LAT 37 14 14 LONG 094 52 41)										
APR , 1976 13...	3.2	1900	3.6	14.0	10	10.0	8	220	62	67
371514094541700 - CHERRY C 2 MILES SE OF WEST MINERAL, KS (LAT 37 15 14 LONG 094 54 17)										
APR , 1976 13...	.62	2100	7.4	16.5	8	9.5	10	290	130	93
371600094502000 - L CHERRY C 2 MILES SW OF SCAMMON, KS (LAT 37 16 00 LONG 094 50 20)										
APR , 1976 13...	.54	1300	5.9	14.0	1	10.1	1	100	47	73
371652094531800 - CHERRY C 2 MILES E OF WEST MINERAL, KS (LAT 37 16 52 LONG 094 53 18)										
APR , 1976 13...	.25	2800	7.4	17.0	10	10.4	11	350	250	110

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)
ARKANSAS RIVER BASIN										
365956094510400 - TAR C AT TREECE, KS (LAT 36 59 56 LONG 094 51 04)										
APR , 1976 15...	--	150	0	123	1400	4.0	.6	.8	--	--
370225094442600 - WILLOW C AT BAXTER SPRINGS, KS (LAT 37 02 25 LONG 094 44 26)										
APR , 1976 15...	--	93	0	76	210	27	.4	--	--	--
370503094382200 - SHORT C AT GALENA, KS (LAT 37 05 03 LONG 094 38 22)										
APR , 1976 15...	--	24	0	20	560	21	9.2	--	--	--
370530095025900 - CHERRY C 3 MILES W OF FAULKNER, KS (LAT 37 05 30 LONG 095 02 59)										
APR , 1976 13...	5.8	78	0	64	880	7.0	.8	.8	3.0	1280
370621095024900 - CHERRY C 2 MILES W OF FAULKNER, KS (LAT 37 06 21 LONG 095 02 49)										
APR , 1976 13...	5.9	78	0	64	900	8.0	.8	.8	2.6	1320
370957095034400 - NEOSHO R 2 MILES E OF OSWEGO, KS (LAT 37 09 57 LONG 095 03 44)										
APR , 1976 13...	4.0	200	0	164	110	27	.4	.4	.7	364
371222094573100 - CHERRY C 3 MILES NE OF HALLOWELL, KS (LAT 37 12 22 LONG 094 57 31)										
APR , 1976 13...	5.7	76	0	62	1100	9.0	.8	.8	8.4	1570
371320094391100 - COW C NR LAWTON, KS (LAT 37 13 20 LONG 094 39 11)										
APR , 1976 14...	6.6	85	0	70	620	27	.7	.7	5.0	963
371414094524100 - L CHERRY C 4 MILES SE OF WEST MINERAL, KS (LAT 37 14 14 LONG 094 52 41)										
APR , 1976 13...	5.1	2	0	2	1100	7.0	.8	.8	26	1500
371514094541700 - CHERRY C 2 MILES SE OF WEST MINERAL, KS (LAT 37 15 14 LONG 094 54 17)										
APR , 1976 13...	6.3	180	0	148	1400	10	.7	.7	.7	2020
371600094502000 - L CHERRY C 2 MILES SW OF SCAMMON, KS (LAT 37 16 00 LONG 094 50 20)										
APR , 1976 13...	5.9	15	0	12	630	9.0	.8	.8	26	1000
371652094531800 - CHERRY C 2 MILES E OF WEST MINERAL, KS (LAT 37 16 52 LONG 094 53 18)										
APR , 1976 13...	8.1	260	0	213	1900	8.0	.8	.8	.3	2760

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
ARKANSAS RIVER BASIN									
365956094510400 - TAR C AT TREECE, KS (LAT 36 59 56 LONG 094 51 04)									
APR , 1976									
15...	--	--	.14	.00	.60	--	.12	.20	.70
370225094442600 - WILLOW C AT BAXTER SPRINGS, KS (LAT 37 02 25 LONG 094 44 26)									
APR , 1976									
15...	--	--	.25	.00	1.1	--	.23	.30	.19
370503094382200 - SHORT C AT GALENA, KS (LAT 37 05 03 LONG 094 38 22)									
APR , 1976									
15...	--	--	.20	.00	.90	--	21	430	9.6
370530095025900 - CHERRY C 3 MILES W OF FAULKNER, KS (LAT 37 05 30 LONG 095 02 59)									
APR , 1976									
13...	1.74	13.6	.18	1.0	.80	.49	.34	.20	.40
370621095024900 - CHERRY C 2 MILES W OF FAULKNER, KS (LAT 37 06 21 LONG 095 02 49)									
APR , 1976									
13...	1.80	15.6	.11	.80	.50	.43	.38	.34	.07
370957095034400 - NEOSHO R 2 MILES E OF OSWEGO, KS (LAT 37 09 57 LONG 095 03 44)									
APR , 1976									
13...	.50	81.4	.20	.60	.90	.29	.30	.56	.12
371222094573100 - CHERRY C 3 MILES NE OF HALLOWELL, KS (LAT 37 12 22 LONG 094 57 31)									
APR , 1976									
13...	2.14	21.2	.07	.40	.30	.38	.43	.36	.09
371320094391100 - COW C NR LAWTON, KS (LAT 37 13 20 LONG 094 39 11)									
APR , 1976									
14...	1.31	37.7	.07	.00	.30	.29	.28	.48	.18
371414094524100 - L CHERRY C 4 MILES SE OF WEST MINERAL, KS (LAT 37 14 14 LONG 094 52 41)									
APR , 1976									
13...	2.04	13.1	.11	.30	.50	.92	.95	.20	.10
371514094541700 - CHERRY C 2 MILES SE OF WEST MINERAL, KS (LAT 37 15 14 LONG 094 54 17)									
APR , 1976									
13...	2.75	3.38	.16	.90	.70	.12	.23	.16	.13
371600094502000 - L CHERRY C 2 MILES SW OF SCAMMON, KS (LAT 37 16 00 LONG 094 50 20)									
APR , 1976									
13...	1.36	1.46	.07	.10	.30	.59	76	.16	.10
371652094531800 - CHERRY C 2 MILES E OF WEST MINERAL, KS (LAT 37 16 52 LONG 094 53 18)									
APR , 1976									
13...	3.75	1.86	.02	.80	.10	.31	.21	.34	.10

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
ARKANSAS RIVER BASIN										
371818094583600 - PLUM C 3 MILES NW OF WEST MINERAL, KS (LAT 37 18 18 LONG 094 58 36)										
APR , 1976										
13...	.08	1610	8.3	21.5	22	13.4	8	160	120	66
372056094573000 - LIGHTNING C 3 MILES E OF MCCUNE, KS (LAT 37 20 56 LONG 094 57 30)										
APR , 1976										
13...	.83	790	7.6	19.5	50	7.2	16	180	23	41
372103094463900 - BRUSH C 2 MILES E OF CHEROKEE, KS (LAT 37 21 03 LONG 094 46 39)										
APR , 1976										
14...	.35	1060	7.0	18.0	22	7.9	9	260	120	52
372118094411200 - COW C 2 MILES S OF PITTSBURG, KS (LAT 37 21 18 LONG 094 41 12)										
APR , 1976										
14...	12	1420	7.6	17.5	7	5.2	14	130	60	83
372226094400500 - EAST COW C TRIB 1 MILE SE OF PITTSBURG, KS (LAT 37 22 26 LONG 094 40 05)										
APR , 1976										
14...	.30	--	--	--	6	9.4	8	--	--	--
372254094401100 - EAST COW C 1 MILE SE OF PITTSBURG, KS (LAT 37 22 54 LONG 094 40 11)										
APR , 1976										
14...	3.3	1600	7.1	18.5	2	9.6	5	190	110	76
372352094533700 - LIGHTNING C 4 MILES NE OF MCCUNE, KS (LAT 37 23 52 LONG 094 53 37)										
APR , 1976										
13...	.58	820	7.8	17.0	10	8.0	16	83	18	72
372811094430900 - FIRST COW C 2 MILES W OF FRONTENAC, KS (LAT 37 28 11 LONG 094 43 09)										
APR , 1976										
14...	.68	1960	7.7	19.0	10	8.2	15	200	140	87
372811094480000 - SECOND COW C 2 MILES NE OF GIRARD, KS (LAT 37 28 11 LONG 094 48 00)										
APR , 1976										
14...	.13	580	7.3	18.0	5	7.4	16	83	15	26
372902094391000 - EAST COW C 2 MILES NE OF FRONTENAC, KS (LAT 37 29 02 LONG 094 39 10)										
APR , 1976										
14...	.49	2400	7.5	19.0	5	11.8	7	340	160	86
373512094383700 - COX C 1 MILE NW OF MULBERRY, KS (LAT 37 35 12 LONG 094 38 37)										
APR , 1976										
14...	1.0	1700	7.8	19.0	2	9.2	4	230	83	22
373518094400500 - DRY BRANCH C 2 MILES NW OF MULBERRY, KS (LAT 37 35 18 LONG 094 40 05)										
APR , 1976										
14...	1.5	2600	7.8	19.5	5	9.5	1	270	93	180

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)
ARKANSAS RIVER BASIN										
371810094583600 - PLUM C 3 MILES NW OF WEST MINERAL, KS (LAT 37 18 10 LONG 094 58 36)										
APR , 1976 13...	5.0	220	0	180	850	5.0	.7	.7	.5	1320
372056094573000 - LIGHTNING C 3 MILES E OF MCCUNE, KS (LAT 37 20 56 LONG 094 57 30)										
APR , 1976 13...	5.3	240	0	197	200	45	.4	.4	6.8	543
372103094463900 - BRUSH C 2 MILES E OF CHEROKEE, KS (LAT 37 21 03 LONG 094 46 39)										
APR , 1976 14...	4.3	170	0	139	1200	4.0	.8	.8	6.6	1740
372118094411200 - COW C 2 MILES S OF PITTSBURG, KS (LAT 37 21 18 LONG 094 41 12)										
APR , 1976 14...	8.1	110	0	90	740	38	.6	.6	6.1	1140
372226094400500 - EAST COW C TRIB 1 MILF SE OF PITTSBURG, KS (LAT 37 22 26 LONG 094 40 05)										
APR , 1976 14...	--	0	0	0	1700	7.0	1.2	1.2	.0	--
372254094401100 - EAST COW C 1 MILE SE OF PITTSBURG, KS (LAT 37 22 54 LONG 094 40 11)										
APR , 1976 14...	6.4	49	0	40	1100	12	.8	.8	7.5	1540
372352094533700 - LIGHTNING C 4 MILES NE OF MCCUNE, KS (LAT 37 23 52 LONG 094 53 37)										
APR , 1976 13...	6.3	240	0	197	120	110	.4	.4	1.5	531
372811094430900 - FIRST COW C 2 MILES W OF FRONTENAC, KS (LAT 37 28 11 LONG 094 43 09)										
APR , 1976 14...	6.9	210	0	172	1200	26	.7	.7	.4	1770
372811094480000 - SECOND COW C 2 MILES SE OF GIRARD, KS (LAT 37 28 11 LONG 094 48 00)										
APR , 1976 14...	5.2	220	0	180	110	30	.2	.2	.2	379
372902094391000 - EAST COW C 2 MILES NE OF FRONTENAC, KS (LAT 37 29 02 LONG 094 39 10)										
APR , 1976 14...	5.3	270	0	221	1600	5.0	.8	.8	5.1	2340
373512094383700 - COX C 1 MILE NW OF MULBERRY, KS (LAT 37 35 12 LONG 094 38 37)										
APR , 1976 14...	4.1	98	0	80	970	8.0	2.2	2.2	10	1380
373518094400500 - DRY BRANCH C 2 MILES NW OF MULBERRY, KS (LAT 37 35 18 LONG 094 40 05)										
APR , 1976 14...	9.8	300	0	246	1300	14	.8	.8	4.4	2020

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)
ARKANSAS RIVER BASIN									
371818094583600 - PLUM C 3 MILES NW OF WEST MINERAL, KS (LAT 37 18 18 LONG 094 58 36)									
APR , 1976									
13...	1.80	.29	.07	.10	.30	.14	.17	.28	.07
372056094573000 - LIGHTNING C 3 MILES E OF MCCUNE, KS (LAT 37 20 56 LONG 094 57 30)									
APR , 1976									
13...	.74	1.22	.16	.50	.70	.23	.34	.28	.18
372103094463900 - BRUSH C 2 MILES E OF CHEROKEE, KS (LAT 37 21 03 LONG 094 46 39)									
APR , 1976									
14...	2.37	1.64	--	1.5	--	.20	.21	.28	.08
372118094411200 - COW C 2 MILES S OF PITTSBURG, KS (LAT 37 21 18 LONG 094 41 12)									
APR , 1976									
14...	1.55	38.5	--	1.2	--	4.2	4.3	5.4	4.2
372226094400500 - EAST COW C TRIB 1 MILE SE OF PITTSBURG, KS (LAT 37 22 26 LONG 094 40 05)									
APR , 1976									
14...	--	--	.00	.00	.00	.00	.00	.00	.00
372254094401100 - EAST COW C 1 MILE SE OF PITTSBURG, KS (LAT 37 22 54 LONG 094 40 11)									
APR , 1976									
14...	2.09	13.7	.16	.70	.70	.17	.17	18	.00
372352094533700 - LIGHTNING C 4 MILES NE OF MCCUNE, KS (LAT 37 23 52 LONG 094 53 37)									
APR , 1976									
13...	.72	.83	.16	.20	.70	.28	.34	.32	.18
372811094430900 - FIRST COW C 2 MILES W OF FRONTENAC, KS (LAT 37 28 11 LONG 094 43 09)									
APR , 1976									
14...	2.41	3.25	--	1.6	--	.11	.26	.20	.64
372811094480000 - SECOND COW C 2 MILES SE OF GIRARD, KS (LAT 37 28 11 LONG 094 48 00)									
APR , 1976									
14...	.52	.13	--	.13	--	.20	.20	.24	.14
372902094391000 - EAST COW C 2 MILES NE OF FRONTENAC, KS (LAT 37 29 02 LONG 094 39 10)									
APR , 1976									
14...	3.18	3.10	--	1.0	--	.01	.01	.30	.16
373512094383700 - COX C 1 MILE NW OF MULBERRY, KS (LAT 37 35 12 LONG 094 38 37)									
APR , 1976									
14..	1.88	4.06	.02	--	.10	.17	.19	.20	.09
373518094400500 - DRY BRANCH C 2 MILES NW OF MULBERRY, KS (LAT 37 35 18 LONG 094 40 05)									
APR , 1976									
14...	2.75	8.24	--	.10	--	.17	.24	.14	.26

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
ARKANSAS RIVER BASIN										
373747094380200 - COX C 1 MILE S OF ARCADIA, KS (LAT 37 37 47 LONG 094 38 02)										
APR , 1976 14...	6.5	3000	7.2	10.5	5	8.3	3	310	170	130
374109094370400 - COX C 2 MILES N OF ARCADIA, KS (LAT 37 41 09 LONG 094 37 04)										
APR , 1976 14...	9.6	2850	6.6	17.5	12	7.6	3	300	170	120
374139094385500 - W FK DRY WOOD C 3 MILES N OF ARCADIA, KS (LAT 37 41 39 LONG 094 38 55)										
APR , 1976 14...	7.3	780	7.7	10.0	25	7.1	6	120	19	9.4

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
373747094380200 - COX C 1 MILE S OF ARCADIA, KS (LAT 37 37 47 LONG 094 38 02)										
APR , 1976 14...	9.2	230	0	189	1600	12	1.2	1.2	6.3	2360
374109094370400 - COX C 2 MILES N OF ARCADIA, KS (LAT 37 41 09 LONG 094 37 04)										
APR , 1976 14...	9.0	210	0	172	1600	11	1.2	1.2	7.7	2330
374139094385500 - W FK DRY WOOD C 3 MILES N OF ARCADIA, KS (LAT 37 41 39 LONG 094 38 55)										
APR , 1976 14...	2.1	260	0	213	160	4.0	.3	.3	4.1	448

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED NITRATE (N) (MG/L)	TOTAL NITRATE (NO3) (MG/L)	DISSOLVED NITRATE (NO3) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)
373747094380200 - COX C 1 MILE S OF ARCADIA, KS (LAT 37 37 47 LONG 094 38 02)									
APR , 1976 14...	3.21	41.7	--	.10	--	.05	.09	.12	.14
374109094370400 - COX C 2 MILES N OF ARCADIA, KS (LAT 37 41 09 LONG 094 37 04)									
APR , 1976 14...	3.17	60.6	.02	.10	.10	.04	.04	.26	.09
374139094385500 - W FK DRY WOOD C 3 MILES N OF ARCADIA, KS (LAT 37 41 39 LONG 094 38 55)									
APR , 1976 14...	.61	8.85	--	.20	--	.02	.09	.18	.21

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ALUM- INUM (AL) (UG/L)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS- SOLVED BORON (B) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CHRO- MIUM (CR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
ARKANSAS RIVER BASIN										
07183500 - NEOSHO R NR PARSONS, KS (LAT 37 18 39 LONG 095 06 37)										
APR , 1976 13...	800	0	0	70	80	0	0	0	0	0
07183800 - LIMESTONE C NR BEULAH, KS (LAT 37 24 12 LONG 094 53 16)										
APR , 1976 13...	300	0	0	110	110	0	0	0	0	0
07184590 - NEOSHO R AT CHETOPA, KS (LAT 37 02 10 LONG 095 04 50)										
APR , 1976 13...	1000	0	0	30	40	0	0	0	0	0
07187560 - SHOAL CREEK NEAR GALENA, KANSAS (LAT 37 02 31 LONG 094 38 34)										
APR , 1976 15...	100	--	--	100	--	0	--	0	--	0

DATE	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
07183500 - NEOSHO R NR PARSONS, KS (LAT 37 18 39 LONG 095 06 37)										
APR , 1976 13...	0	920	70	0	0	330	130	.0	10	10
07183800 - LIMESTONE C NR BEULAH, KS (LAT 37 24 12 LONG 094 53 16)										
APR , 1976 13...	0	290	10	0	0	130	130	.0	10	10
07184590 - NEOSHO R AT CHETOPA, KS (LAT 37 02 10 LONG 095 04 50)										
APR , 1976 13...	0	880	10	0	0	420	200	.0	10	10
07187560 - SHOAL CREEK NEAR GALENA, KANSAS (LAT 37 02 31 LONG 094 38 34)										
APR , 1976 15...	--	160	--	0	--	30	--	.0	100	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ALUMINUM (AL) (UG/L)	DIS-SOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DIS-SOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)
ARKANSAS RIVER BASIN											
365956094510400 - TAR C AT TREECE, KS (LAT 36 59 56 LONG 094 51 04)											
APR , 1976 15...	100	--	0	80	0	20	--	0	--	10	--
370225094442600 - WILLOW C AT BAXTER SPRINGS, KS (LAT 37 02 25 LONG 094 44 26)											
APR , 1976 15...	100	--	--	60	--	0	--	0	--	0	--
370503094382200 - SHORT C AT GALENA, KS (LAT 37 05 03 LONG 094 38 22)											
APR , 1976 15...	3300	--	0	470	--	420	--	0	--	480	--
370530095025900 - CHERRY C 3 MILES W OF FAULKNER, KS (LAT 37 05 30 LONG 095 02 59)											
APR , 1976 13...	500	0	0	200	140	0	0	0	0	0	0
370621095024900 - CHERRY C 2 MILES W OF FAULKNER, KS (LAT 37 06 21 LONG 095 02 49)											
APR , 1976 13...	300	0	0	190	190	0	0	0	0	10	0
370957095034400 - NEOSHO R 2 MILES E OF OSWEGO, KS (LAT 37 09 57 LONG 095 03 44)											
APR , 1976 13...	400	0	0	100	80	0	0	0	0	0	0
371222094573100 - CHERRY C 3 MILES NE OF HALLOWELL, KS (LAT 37 12 22 LONG 094 57 31)											
APR , 1976 13...	100	0	0	170	180	0	0	0	0	0	0
371320094391100 - COW C NW LAWTON, KS (LAT 37 13 20 LONG 094 39 11)											
APR , 1976 14...	400	0	0	240	260	0	0	0	0	0	0
371414094524100 - L CHERRY C 4 MILES SE OF WEST MINERAL, KS (LAT 37 14 14 LONG 094 52 41)											
APR , 1976 13...	3200	3400	0	210	200	0	0	0	0	0	10
371514094541700 - CHERRY C 2 MILES SE OF WEST MINERAL, KS (LAT 37 15 14 LONG 094 54 17)											
APR , 1976 13...	0	0	0	170	170	0	0	0	0	0	0
371600094502800 - L CHERRY C 2 MILES SW OF SCAMMON, KS (LAT 37 16 00 LONG 094 50 28)											
APR , 1976 13...	100	0	0	310	280	0	0	0	0	0	10
371652094531800 - CHERRY C 2 MILES E OF WEST MINERAL, KS (LAT 37 16 52 LONG 094 53 18)											
APR , 1976 13...	200	100	0	310	310	0	0	0	0	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
ARKANSAS RIVER BASIN										
365956094510400 - TAR C AT TREECE, KS (LAT 36 59 56 LONG 094 51 04)										
APR , 1976										
15...	270	--	0	--	280	--	.0	--	8800	--
370225094442600 - WILLOW C AT BAXTER SPRINGS, KS (LAT 37 02 25 LONG 094 44 26)										
APR , 1976										
15...	280	--	0	--	240	--	.0	--	640	--
370503094382200 - SHORT C AT GALENA, KS (LAT 37 05 03 LONG 094 38 22)										
APR , 1976										
15...	1200	--	4300	--	2100	--	1.0	--	57000	--
370530095025900 - CHERRY C 3 MILES W OF FAULKNER, KS (LAT 37 05 30 LONG 095 02 59)										
APR , 1976										
13...	1200	70	0	0	2400	2300	.0	--	30	20
370621095024900 - CHERRY C 2 MILES W OF FAULKNER, KS (LAT 37 06 21 LONG 095 02 49)										
APR , 1976										
13...	790	40	0	0	2300	2200	.5	.0	20	80
370957095034400 - NEOSHO R 2 MILES E OF OSWEGO, KS (LAT 37 09 57 LONG 095 03 44)										
APR , 1976										
13...	700	30	0	0	170	10	.0	--	10	10
371222094573100 - CHERRY C 3 MILES NE OF HALLOWELL, KS (LAT 37 12 22 LONG 094 57 31)										
APR , 1976										
13...	300	40	0	0	3300	3200	.0	--	30	30
371320094391100 - COW C NR LAWTON, KS (LAT 37 13 20 LONG 094 39 11)										
APR , 1976										
14...	770	80	0	0	2900	2800	.0	--	30	20
371414094524100 - L CHERRY C 4 MILES SE OF WEST MINERAL, KS (LAT 37 14 14 LONG 094 52 41)										
APR , 1976										
13...	1600	1200	0	0	7600	7600	.0	--	180	220
371514094541700 - CHERRY C 2 MILES SE OF WEST MINERAL, KS (LAT 37 15 14 LONG 094 54 17)										
APR , 1976										
13...	520	40	0	0	620	630	.0	--	10	10
371600094502000 - L CHERRY C 2 MILES SW OF SCAMMON, KS (LAT 37 16 00 LONG 094 50 20)										
APR , 1976										
13...	180	60	0	0	5400	5400	.0	--	120	110
371652094531800 - CHERRY C 2 MILES E OF WEST MINERAL, KS (LAT 37 16 52 LONG 094 53 18)										
APR , 1976										
13...	500	10	0	0	470	450	.0	--	10	20

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ALUMINUM (AL) (UG/L)	DISSOLVED ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DISSOLVED BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)
ARKANSAS RIVER BASIN											
371818094583600 - PLUM C 3 MILES NW OF WEST MINERAL, KS (LAT 37 18 18 LONG 094 58 36)											
APR , 1976											
13...	600	0	0	190	160	0	0	0	0	10	10
372056094573000 - LIGHTNING C 3 MILES E OF MCCUNE, KS (LAT 37 20 56 LONG 094 57 30)											
APR , 1976											
13...	1300	0	10	190	170	0	0	0	0	0	0
372103094463900 - BRUSH C 2 MILES E OF CHEROKEE, KS (LAT 37 21 03 LONG 094 46 39)											
APR , 1976											
14...	400	0	0	170	210	0	0	0	0	0	0
372118094411200 - COW C 2 MILES S OF PITTSBURG, KS (LAT 37 21 18 LONG 094 41 12)											
APR , 1976											
14...	100	0	0	270	270	0	0	0	0	0	0
372254094401100 - EAST COW C 1 MILE SE OF PITTSBURG, KS (LAT 37 22 54 LONG 094 40 11)											
APR , 1976											
14...	0	0	0	200	200	0	0	0	0	0	0
372352094533700 - LIGHTNING C 4 MILES NE OF MCCUNE, KS (LAT 37 23 52 LONG 094 53 37)											
APR , 1976											
13...	400	0	0	170	170	0	0	0	0	0	0
372811094430900 - FIRST COW C 2 MILES N OF FRONTENAC, KS (LAT 37 28 11 LONG 094 43 09)											
APR , 1976											
14...	400	0	0	210	200	0	0	0	0	0	0
372811094480000 - SECOND COW C 2 MILES SE OF GIRARD, KS (LAT 37 28 11 LONG 094 48 00)											
APR , 1976											
14...	200	100	0	70	70	0	0	0	0	0	0
372902094391000 - EAST COW C 2 MILES NE OF FRONTENAC, KS (LAT 37 29 02 LONG 094 39 10)											
APR , 1976											
14...	100	0	0	200	190	0	0	0	0	0	10
373512094383700 - COX C 1 MILE NW OF MULBERRY, KS (LAT 37 35 12 LONG 094 38 37)											
APR , 1976											
14...	300	0	0	210	220	0	0	0	0	0	0
373518094400500 - DRY BRANCH C 2 MILES NW OF MULBERRY, KS (LAT 37 35 18 LONG 094 40 05)											
APR , 1976											
14...	100	100	0	420	420	0	0	0	0	0	0
373747094380200 - COX C 1 MILE S OF ARCADIA, KS (LAT 37 37 47 LONG 094 38 02)											
APR , 1976											
14...	400	0	0	380	390	0	0	0	0	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
ARKANSAS RIVER BASIN										
371010094583600 - PLUM C 3 MILES NW OF WEST MINERAL, KS (LAT 37 10 10 LONG 094 58 36)										
APR , 1976 13...	690	20	0	0	500	420	.0	--	10	10
372056094573000 - LIGHTNING C 3 MILES E OF MCCUNE, KS (LAT 37 20 56 LONG 094 57 30)										
APR , 1976 13...	1700	20	0	0	1500	1400	.0	--	10	10
372103094463900 - BRUSH C 2 MILES E OF CHEROKEE, KS (LAT 37 21 03 LONG 094 46 39)										
APR , 1976 14...	2900	120	0	0	2500	2500	.0	--	90	60
372118094411200 - COW C 2 MILES S OF PITTSBURG, KS (LAT 37 21 18 LONG 094 41 12)										
APR , 1976 14...	760	80	0	0	5300	5200	.0	--	80	70
372254094401100 - EAST COW C 1 MILE SE OF PITTSBURG, KS (LAT 37 22 54 LONG 094 40 11)										
APR , 1976 14...	280	40	0	0	9600	9600	.7	--	220	210
372352094533700 - LIGHTNING C 4 MILES NE OF MCCUNE, KS (LAT 37 23 52 LONG 094 53 37)										
APR , 1976 13...	440	50	0	0	570	320	.0	--	0	90
372811094430900 - FIRST COW C 2 MILES W OF FRONTENAC, KS (LAT 37 28 11 LONG 094 43 09)										
APR , 1976 14...	510	50	0	0	640	650	.0	--	10	10
372811094480000 - SECOND COW C 2 MILES SE OF GIRARD, KS (LAT 37 28 11 LONG 094 48 00)										
APR , 1976 14...	230	10	0	0	160	100	.0	--	10	10
372902094391000 - EAST COW C 2 MILES NE OF FRONTENAC, KS (LAT 37 29 02 LONG 094 39 10)										
APR , 1976 14...	300	80	0	0	700	610	.0	--	10	10
373512094383700 - COX C 1 MILE NW OF MULBERRY, KS (LAT 37 35 12 LONG 094 38 37)										
APR , 1976 14...	140	20	0	0	1800	1800	.0	--	130	130
373518094400500 - DRY BRANCH C 2 MILES NW OF MULBERRY, KS (LAT 37 35 18 LONG 094 40 05)										
APR , 1976 14...	350	20	0	0	1900	1800	.5	--	10	10
373747094380200 - COX C 1 MILE S OF ARCADIA, KS (LAT 37 37 47 LONG 094 38 02)										
APR , 1976 14...	660	70	0	0	1900	1900	.0	--	100	40

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BORON (B) (UG/L)	DIS-SOLVED BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)
ARKANSAS RIVER BASIN											
374109094370400 - COX C 2 MILES N OF ARCADIA, KS (LAT 37 41 09 LONG 094 37 04)											
APR , 1976 14...	600	0	0	370	370	0	0	0	10	0	0
374139094385500 - W FK DRY WOOD C 3 MILES N OF ARCADIA, KS (LAT 37 41 39 LONG 094 38 55)											
APR , 1976 14...	600	0	0	160	150	0	0	0	0	0	0

DATE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
374109094370400 - COX C 2 MILES N OF ARCADIA, KS (LAT 37 41 09 LONG 094 37 04)										
APR , 1976 14...	780	10	0	0	1700	1600	.5	--	20	10
374139094385500 - W FK DRY WOOD C 3 MILES N OF ARCADIA, KS (LAT 37 41 39 LONG 094 38 55)										
APR , 1976 14...	930	10	0	0	310	190	.0	--	10	10

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)
BIG NEMAHA RIVER BASIN											
06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 18)											
MAR , 1977											
01...	11	550	8.0	.5	7	14.2	290	100	85	18	18
MAY											
25...	78	370	7.8	23.5	480	6.8	160	42	47	9.6	9.6
WOLF RIVER BASIN											
06815800 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)											
OCT , 1976											
15...	4.1	297	8.1	14.0	3	--	100	0	23	11	19
MAR , 1977											
01...	20	440	8.1	4.5	10	13.6	200	15	57	14	17
MAY											
26...	26	420	8.2	22.5	70	7.5	190	25	56	12	13
AUG											
30...	44	362	8.1	27.5	80	7.4	170	2	38	9.3	9.6
KANSAS RIVER BASIN											
06878000 - CHAPMAN C NR CHAPMAN, KS (LAT 39 01 52 LONG 097 02 26)											
JUN , 1977											
18...	9260	94	6.4	22.0	120	--	31	0	8.8	2.3	5.7
06890080 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)											
FEB , 1977											
28...	.16	430	7.6	5.0	8	11.6	200	1	55	15	26
MAY											
25...	.76	440	7.8	23.0	35	5.5	190	5	53	13	8.0
AUG											
29...	23	214	7.9	20.5	200	7.5	--	--	--	--	--
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)											
FEB , 1977											
28...	.14	475	7.6	2.0	10	12.8	220	14	63	15	17
MAY											
25...	3.8	4	7.8	22.0	65	7.6	190	29	58	12	15
AUG											
29...	17	242	7.9	20.0	160	8.4	83	0	27	3.7	8.3
ARKANSAS RIVER BASIN											
07142270 - RATTLESNAKE C TR NR HOPEWELL, KS (LAT 37 58 33 LONG 098 59 09)											
APR , 1977											
12...	.03	760	--	19.0	--	--	260	0	86	12	53
07142540 - WILD HORSE C NR ST. JOHN, KS (LAT 38 03 39 LONG 098 45 52)											
APR , 1977											
12...	.35	650	--	15.0	--	--	240	0	78	12	49
07142575 - RATTLESNAKE C NR ZENITH, KS (LAT 38 06 01 LONG 098 30 32)											
APR , 1977											
11...	68	3090	--	--	--	--	240	74	69	16	580
07142650 - PEACE C NR SYLVIA, KS (LAT 38 04 36 LONG 098 26 18)											
APR , 1977											
11...	.10	3240	--	19.0	--	--	250	86	74	15	590
07142670 - PEACE C NR STERLING, KS (LAT 38 08 43 LONG 098 15 13)											
APR , 1977											
12...	3.5	5020	--	13.0	--	--	310	160	86	23	940

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
BIG NEMAHA RIVER BASIN											
06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)											
MAR , 1977 01...	12	.5	2.8	226	0	185	3.6	130	18	.2	5.3
MAY 25...	11	.3	5.4	140	0	110	3.6	43	8.1	.3	7.6
WOLF RIVER BASIN											
06815000 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)											
OCT , 1976 15...	28	.8	3.0	130	0	108	1.7	28	12	.3	.9
MAR , 1977 01...	15	.5	3.0	226	0	185	2.9	32	9.2	.3	8.5
MAY 26...	13	.4	5.5	200	0	160	2.0	33	8.1	.4	12
AUG 30...	14	.4	6.9	140	0	110	1.8	20	6.1	.3	12
KANSAS RIVER BASIN											
06878000 - CHAPMAN C NR CHAPMAN, KS (LAT 39 01 52 LONG 097 02 24)											
JUN , 1977 18...	24	.4	5.6	40	0	33	25	6.6	5.0	.4	7.6
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)											
FEB , 1977 28...	27	.8	5.5	242	0	198	9.7	63	9.5	.2	8.4
MAY 25...	8	.3	8.0	220	0	180	5.6	31	8.8	.4	12
AUG 29...	--	--	--	94	0	77	1.9	15	3.9	.3	11
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)											
FEB , 1977 28...	14	.5	4.3	250	0	205	10	35	9.0	.2	13
MAY 25...	14	.5	6.0	210	0	170	5.3	33	8.5	.4	13
AUG 29...	16	.4	7.4	110	0	90	5.6	14	5.1	.3	11
ARKANSAS RIVER BASIN											
07142270 - RATTLESNAKE C TR NR HOPEWELL, KS (LAT 37 58 33 LONG 098 59 09)											
APR , 1977 12...	30	1.4	6.0	370	0	303	--	47	32	--	21
07142540 - WILD HORSE C NR ST. JOHN, KS (LAT 38 03 39 LONG 098 45 52)											
APR , 1977 12...	30	1.4	4.0	330	0	271	--	31	45	--	15
07142575 - RATTLESNAKE C NR ZENITH, KS (LAT 38 04 01 LONG 098 30 32)											
APR , 1977 11...	83	16	5.0	200	0	164	--	97	830	--	11
07142650 - PEACE C NR SYLVIA, KS (LAT 38 04 34 LONG 098 26 10)											
APR , 1977 11...	83	16	7.0	200	0	164	--	88	980	--	4.3
07142670 - PEACE C NR STERLING, KS (LAT 38 08 43 LONG 098 15 13)											
APR , 1977 12...	87	23	6.0	180	0	148	--	140	1400	--	3.9

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
BIG NEMAHA RIVER BASIN											
06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)											
MAR , 1977 01...	399	389	.54	12.0	--	--	1.8	1.2	3.0	.09	4.4
MAY 25...	233	200	.32	49.1	--	--	1.5	2.8	4.3	.73	30
WOLF RIVER BASIN											
06815600 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)											
OCT , 1976 15...	185	161	.25	2.05	--	--	1.9	.64	2.5	.05	3.2
MAR , 1977 01...	266	252	.36	14.9	--	--	1.7	.78	2.5	.31	3.1
MAY 26...	259	239	.35	10.2	--	--	2.1	.57	2.7	.34	7.1
AUG 30...	176	167	.24	21.2	--	--	1.8	1.3	3.1	.52	7.1
KANSAS RIVER BASIN											
06878000 - CHAPMAN C NR CHAPMAN, KS (LAT 39 01 52 LONG 097 02 24)											
JUN , 1977 10...	71	62	.10	1770	--	--	.03	.00	.03	.77	--
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)											
FEB , 1977 28...	296	282	.40	.13	--	--	.39	.41	.80	.13	7.3
MAY 25...	273	243	.37	.56	--	--	1.2	1.5	2.7	.32	8.3
AUG 29...	131	--	.18	8.28	--	--	1.2	1.7	2.9	.84	15
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)											
FEB , 1977 28...	292	280	.40	.11	--	--	.43	.46	.89	.19	6.5
MAY 25...	275	250	.37	2.82	--	--	1.4	.50	2.0	.26	9.4
AUG 29...	141	131	.19	6.55	--	--	1.3	1.6	2.9	.42	14
ARKANSAS RIVER BASIN											
07142270 - RATTLESNAKE C TR NR HOPEWELL, KS (LAT 37 50 33 LONG 098 59 09)											
APR , 1977 12...	438	440	.60	.04	.10	.44	--	--	--	.09	--
07142540 - WILD HORSE C NR ST. JOHN, KS (LAT 38 03 39 LONG 098 45 52)											
APR , 1977 12...	397	397	.54	.38	.10	.44	--	--	--	.13	--
07142575 - RATTLESNAKE C NR ZENITH, KS (LAT 38 06 01 LONG 098 30 32)											
APR , 1977 11...	--	1680	2.28	218	1.0	4.4	--	--	--	.06	--
07142650 - PEACE C NR SYLVIA, KS (LAT 38 04 36 LONG 098 26 18)											
APR , 1977 11...	--	1770	2.41	.48	.30	1.3	--	--	--	.18	--
07142670 - PEACE C NR STERLING, KS (LAT 38 08 43 LONG 098 15 13)											
APR , 1977 12...	--	2750	3.74	26.0	1.1	4.9	--	--	--	.20	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
ARKANSAS RIVER BASIN											
07142740 - SALT C NR HUTCHINSON, KS (LAT 38 04 23 LONG 098 02 11)											
APR , 1977 13...	4.9	4780	--	15.0	--	--	360	140	100	24	880
07144590 - NF NINNESCAH R NR SYLVIA, KS (LAT 37 55 59 LONG 098 24 36)											
APR , 1977 14...	19	1590	--	17.0	--	--	240	35	80	11	240
07144620 - NF NINNESCAH R AB SILVER C NR ARLINGTON, KS (LAT 37 51 09 LONG 098 09 30)											
APR , 1977 14...	49	1140	--	20.0	--	--	200	14	69	7.7	160
07144640 - SILVER C NR LANGDON, KS (LAT 37 47 54 LONG 098 19 59)											
APR , 1977 13...	10	2420	--	16.0	--	--	340	24	110	18	370
07144660 - SILVER C NR ARLINGTON, KS (LAT 37 50 30 LONG 098 11 47)											
APR , 1977 14...	27	1890	--	19.5	--	--	280	64	85	16	290
07144680 - GOOSE C NR ARLINGTON, KS (LAT 37 49 24 LONG 098 11 32)											
APR , 1977 13...	4.1	880	--	15.0	--	--	160	18	46	11	100
07144740 - RED ROCK C NR CASTLETON, KS (LAT 37 53 55 LONG 098 00 35)											
APR , 1977 14...	4.4	710	--	20.0	--	--	240	0	67	19	63
07144890 - SF NINNESCAH R AT PRATT, KS (LAT 37 38 03 LONG 098 44 15)											
APR , 1977 12...	12	460	--	16.5	--	--	160	2	54	7.1	30
07145220 - SMOOTS C NR MURDOCK, KS (LAT 37 38 13 LONG 097 54 06)											
APR , 1977 14...	15	630	--	22.0	--	--	230	24	61	19	49
07148200 - MULE C NR WILMORE, KS (LAT 37 16 55 LONG 099 02 36)											
APR , 1977 15...	12	560	--	20.0	--	--	280	72	90	13	17
07148580 - TURKEY C NR CROFT, KS (LAT 37 29 52 LONG 098 56 56)											
APR , 1977 12...	3.5	350	--	18.0	--	--	150	0	51	5.7	10
07148600 - MEDICINE LODGE R AT SUN CITY, KS (LAT 37 22 13 LONG 098 54 53)											
APR , 1977 15...	36	590	--	21.0	--	--	210	59	64	12	33

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
ARKANSAS RIVER BASIN											
07142740 - SALT C NR HUTCHINSON, KS (LAT 38 04 23 LONG 098 02 11)											
APR , 1977 13...	84	21	6.0	270	0	221	--	168	1360	--	8.4
07144590 - NF NINNESCAH R NR SYLVIA, KS (LAT 37 55 59 LONG 098 24 36)											
APR , 1977 14...	68	6.7	4.0	260	0	213	--	64	350	--	13
07144620 - NF NINNESCAH R AB SILVER C NR ARLINGTON, KS (LAT 37 51 09 LONG 098 09 30)											
APR , 1977 14...	63	4.9	3.0	230	0	189	--	56	220	--	13
07144640 - SILVER C NR LANGDON, KS (LAT 37 47 54 LONG 098 19 59)											
APR , 1977 13...	69	8.6	4.0	260	0	213	--	94	590	--	18
07144660 - SILVER C NR ARLINGTON, KS (LAT 37 50 30 LONG 098 11 47)											
APR , 1977 14...	69	7.6	4.0	260	0	213	--	45	430	--	17
07144680 - GOOSE C NR ARLINGTON, KS (LAT 37 49 24 LONG 098 11 32)											
APR , 1977 13...	57	3.4	2.0	170	0	139	--	39	140	--	13
07144740 - RED ROCK C NR CASTLETON, KS (LAT 37 53 55 LONG 098 00 35)											
APR , 1977 14...	35	1.7	4.0	300	0	246	--	63	51	--	14
07144890 - SF NINNESCAH R AT PRATT, KS (LAT 37 38 03 LONG 098 44 15)											
APR , 1977 12...	28	1.0	3.0	200	0	164	--	20	36	--	21
07145220 - SHOOTS C NR MURDOCK, KS (LAT 37 38 13 LONG 097 54 06)											
APR , 1977 14...	31	1.4	4.0	250	0	205	--	77	46	--	12
07148200 - MULE C NR WILMORE, KS (LAT 37 16 55 LONG 099 02 34)											
APR , 1977 15...	12	.4	2.0	190	0	156	--	88	17	--	24
07148580 - TURKEY C NR CROFT, KS (LAT 37 29 52 LONG 098 56 56)											
APR , 1977 12...	20	.6	3.0	190	0	156	--	15	18	--	21
07148600 - MEDICINE LODGE R AT SUN CITY, KS (LAT 37 22 13 LONG 098 54 53)											
APR , 1977 15...	25	1.0	3.0	180	0	148	--	88	35	--	19

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
ARKANSAS RIVER BASIN											
07142740 - SALT C NR HUTCHINSON, KS (LAT 38 04 23 LONG 098 02 11)											
APR , 1977 13...	--	2640	3.59	34.9	.10	.40	--	--	--	.06	--
07144590 - NF NINNESCAH R NR SYLVIA, KS (LAT 37 55 59 LONG 098 24 36)											
APR , 1977 14...	895	892	1.22	45.9	.50	2.2	--	--	--	.07	--
07144620 - NF NINNESCAH R AB SILVER C NR ARLINGTON, KS (LAT 37 51 09 LONG 098 09 30)											
APR , 1977 14...	644	647	.88	85.2	1.2	5.3	--	--	--	.06	--
07144640 - SILVER C NR LANGDON, KS (LAT 37 47 54 LONG 098 19 59)											
APR , 1977 13...	--	1330	1.81	35.9	.60	2.7	--	--	--	.08	--
07144660 - SILVER C NR ARLINGTON, KS (LAT 37 50 30 LONG 098 11 47)											
APR , 1977 14...	--	1050	1.43	76.5	.40	1.8	--	--	--	.04	--
07144680 - GOOSE C NR ARLINGTON, KS (LAT 37 49 24 LONG 098 11 32)											
APR , 1977 13...	447	448	.61	4.95	1.1	4.9	--	--	--	.06	--
07144740 - RED ROCK C NR CASTLETON, KS (LAT 37 53 55 LONG 098 00 35)											
APR , 1977 14...	437	435	.59	5.19	1.4	6.2	--	--	--	.10	--
07144890 - SF NINNESCAH R AT PRATT, KS (LAT 37 38 03 LONG 098 44 15)											
APR , 1977 12...	278	278	.38	9.01	2.0	8.9	--	--	--	.06	--
07145220 - SMOOTS C NR MURDOCK, KS (LAT 37 38 13 LONG 097 56 06)											
APR , 1977 14...	392	392	.53	15.9	.10	.40	--	--	--	.05	--
07148200 - MULE C NR WILMORE, KS (LAT 37 16 55 LONG 099 02 34)											
APR , 1977 15...	375	345	.51	12.1	.10	.40	--	--	--	.03	--
07148580 - TURKEY C NR CROFT, KS (LAT 37 29 52 LONG 098 56 56)											
APR , 1977 12...	230	234	.31	2.17	1.9	8.4	--	--	--	.07	--
07148600 - MEDICINE LODGE R AT SUN CITY, KS (LAT 37 22 13 LONG 098 54 53)											
APR , 1977 15...	350	346	.48	34.0	.70	3.1	--	--	--	.03	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
ARKANSAS RIVER BASIN											
07148900 - ELM C AT MEDICINE LODGE, KS (LAT 37 16 25 LONG 098 34 28)											
APR , 1977 15...	36	490	--	19.0	--	--	200	8	67	7.6	28
07151200 - CHIKASKIA R NR ZENDA, KS (LAT 37 28 23 LONG 098 16 55)											
APR , 1977 15...	20	500	8.6	20.0	--	--	220	0	75	9.0	22
07151290 - SAND C NR ZENDA, KS (LAT 37 24 41 LONG 098 16 55)											
APR , 1977 15...	10	440	--	21.0	--	--	190	0	64	6.9	23
07187560 - SHOAL CREEK NEAR GALENA, KANSAS (LAT 37 02 31 LONG 094 38 34)											
JUN , 1977 07...	88	270	7.6	26.0	--	9.4	110	0	41	1.1	6.0
365956094510400 - TAR C AT TREECE, KS (LAT 36 59 56 LONG 094 51 04)											
JUN , 1977 07...	.15	1420	7.3	25.0	--	8.0	880	780	320	20	6.8
370503094382200 - SHORT C AT GALENA, KS (LAT 37 05 03 LONG 094 38 22)											
JUN , 1977 07...	2.1	1360	5.0	29.0	--	9.2	390	390	140	9.9	24
370930097084000 - 33S 3E 19DCD SLATE CREEK (LAT 37 09 30 LONG 097 08 40)											
NOV , 1976 17...	.00	10400	8.1	3.0	--	--	1060	750	278	88	2380
370953097100200 - 33S 2E 23DAA SLATE CREEK (LAT 37 09 53 LONG 097 10 02)											
NOV , 1976 17...	4.0	9700	7.7	3.5	--	--	938	666	246	79	2160
371004097085700 - 33S 2E 24ADD SLATE CREEK (LAT 37 10 04 LONG 097 08 57)											
NOV , 1976 17...	4.4	9000	8.2	3.5	--	--	940	670	250	77	2000
371022097093500 - 33S 2E 24BAA SLATE CREEK (LAT 37 10 22 LONG 097 09 35)											
NOV , 1976 17...	.00	900	8.3	4.0	--	--	208	0	29	33	154
371022097115900 - 33S 2E 22BBB SLATE CREEK (LAT 37 10 22 LONG 097 11 59)											
NOV , 1976 17...	4.5	10400	7.9	4.0	--	--	975	701	259	80	2350
371026097120100 - 33S 2E 15CCC UNNAMED TRIB. (LAT 37 10 26 LONG 097 12 01)											
NOV , 1976 17...	.00	3400	7.8	3.0	--	--	529	111	133	48	730

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
ARKANSAS RIVER BASIN											
07148900 - ELM C AT MEDICINE LODGE, KS (LAT 37 16 25 LONG 098 34 28)											
APR , 1977 15...	23	.9	2.0	230	0	189	--	33	31	--	15
07151200 - CHIKASKIA R NR ZENDA, KS (LAT 37 28 23 LONG 098 16 55)											
APR , 1977 15...	17	.6	3.0	270	5	230	1.1	18	23	--	22
07151290 - SAND C NR ZENDA, KS (LAT 37 24 41 LONG 098 16 55)											
APR , 1977 15...	21	.7	2.0	290	0	238	--	15	22	--	18
07187560 - SHOAL CREEK NEAR GALENA, KANSAS (LAT 37 02 31 LONG 094 38 34)											
JUN , 1977 07...	11	.3	1.5	160	0	131	6.4	14	11	.1	12
365956094510400 - TAR C AT TREECE, KS (LAT 36 59 56 LONG 094 51 04)											
JUN , 1977 07...	2	.1	1.5	130	0	107	10	960	6.0	.3	7.9
370503094382200 - SHORT C AT GALENA, KS (LAT 37 05 03 LONG 094 38 22)											
JUN , 1977 07...	11	.5	13	6	0	5	99	830	27	--	30
370930097084000 - 33S 3E 19DCD SLATE CREEK (LAT 37 09 30 LONG 097 08 40)											
NOV , 1976 17...	83	32	11	370	0	310	4.8	740	3660	--	5.9
370953097100200 - 33S 2E 23DAA SLATE CREEK (LAT 37 09 53 LONG 097 10 02)											
NOV , 1976 17...	83	31	11	332	0	272	11	642	3300	--	8.9
371004097085700 - 33S 2E 24ADD SLATE CREEK (LAT 37 10 04 LONG 097 08 57)											
NOV , 1976 17...	82	28	9.8	329	0	270	3.3	690	3050	--	6.9
371022097093500 - 33S 2E 24BAA SLATE CREEK (LAT 37 10 22 LONG 097 09 35)											
NOV , 1976 17...	61	4.6	4.4	410	0	336	3.3	124	57	--	2.2
371022097115900 - 33S 2E 22BBB SLATE CREEK (LAT 37 10 22 LONG 097 11 59)											
NOV , 1976 17...	84	33	10	334	0	274	6.7	706	3540	--	7.2
371026097120100 - 33S 2E 15CCC UNNAMED TRIB. (LAT 37 10 26 LONG 097 12 01)											
NOV , 1976 17...	75	14	4.4	510	0	418	13	604	790	--	14

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
ARKANSAS RIVER BASIN											
07148900 - ELM C AT MEDICINE LODGE, KS (LAT 37 16 25 LONG 098 34 28)											
APR , 1977 15...	300	299	.41	29.2	.50	2.2	--	--	--	.06	--
07151200 - CHIKASKIA R NR ZENDA, KS (LAT 37 28 23 LONG 098 16 55)											
APR , 1977 15...	315	316	.43	17.0	1.3	5.8	--	--	--	.08	--
07151290 - SAND C NR ZENDA, KS (LAT 37 24 41 LONG 098 16 55)											
APR , 1977 15...	273	296	.37	7.37	.40	1.8	--	--	--	.08	--
07187560 - SHOAL CREEK NEAR GALENA, KANSAS (LAT 37 02 31 LONG 094 38 34)											
JUN , 1977 07...	--	169	.23	40.5	.70	3.1	--	--	--	.14	--
365956094510400 - TAR C AT TREECE, KS (LAT 36 59 56 LONG 094 51 04)											
JUN , 1977 07...	--	1400	1.90	.57	.10	.40	--	--	--	.10	--
370503094382200 - SHORT C AT GALENA, KS (LAT 37 05 03 LONG 094 38 22)											
JUN , 1977 07...	--	1430	1.94	8.19	4.2	19	--	--	--	62	--
370930097084000 - 33S 3E 19DCD SLATE CREEK (LAT 37 09 30 LONG 097 08 40)											
NOV , 1976 17...	--	7350	10.0	.00	.32	1.4	--	--	--	--	--
370953097100200 - 33S 2E 23DAA SLATE CREEK (LAT 37 09 53 LONG 097 10 02)											
NOV , 1976 17...	--	6610	8.99	72.8	.11	.50	--	--	--	--	--
371004097085700 - 33S 2E 24ADD SLATE CREEK (LAT 37 10 04 LONG 097 08 57)											
NOV , 1976 17...	--	6250	8.50	74.4	.05	.20	--	--	--	--	--
371022097093500 - 33S 2E 24BAA SLATE CREEK (LAT 37 10 22 LONG 097 09 35)											
NOV , 1976 17...	--	611	.83	.00	1.4	6.1	--	--	--	--	--
371022097115900 - 33S 2E 22BBB SLATE CREEK (LAT 37 10 22 LONG 097 11 59)											
NOV , 1976 17...	--	7120	9.68	88.0	.54	2.4	--	--	--	--	--
371026097120100 - 33S 2E 15CCC UNNAMED TRIB. (LAT 37 10 26 LONG 097 12 01)											
NOV , 1976 17...	--	2560	3.48	.01	.00	.00	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)
ARKANSAS RIVER BASIN											
371115097130000 - 33S 2E 16BAA SLATE CREEK (LAT 37 11 15 LONG 097 13 00)											
NOV , 1976											
17...	3.8	1060	7.8	2.5	--	--	544	278	139	48	340
371144097142400 - 33S 2E 8CBB SLATE CREEK (LAT 37 11 44 LONG 097 14 24)											
NOV , 1976											
17...	3.7	910	7.8	2.5	--	--	396	136	91	41	71
371320094391100 - COW C NR LAWTON, KS (LAT 37 13 20 LONG 094 39 11)											
JUN , 1977											
21...	7310	105	7.2	20.5	--	--	65	39	17	5.5	5.2
371852097104200 - 31S 2E 35ABB NINNESCAH RIVER (LAT 37 18 52 LONG 097 10 42)											
NOV , 1976											
17...	141	1360	8.3	4.5	--	--	265	71	80	16	200
371934097125400 - 31S 2E 28BDD NINNESCAH RIVER (LAT 37 19 34 LONG 097 12 54)											
NOV , 1976											
17...	130	1400	8.2	3.5	--	--	260	66	83	13	199
372011097142500 - 31S 2E 20CCC NINNESCAH RIVER (LAT 37 20 11 LONG 097 14 25)											
NOV , 1976											
17...	133	1360	8.2	2.5	--	--	261	65	80	15	199
372103097152800 - 31S 2E 18CCC NINNESCAH RIVER (LAT 37 21 03 LONG 097 15 28)											
NOV , 1976											
17...	132	1340	8.1	2.5	--	--	264	68	78	17	201
372150097163400 - 31S 1E 12CCC NINNESCAH RIVER (LAT 37 21 50 LONG 097 16 34)											
NOV , 1976											
16...	130	1380	7.5	4.0	--	--	260	64	78	16	202
372219097180900 - 31S 1E 10ACC NINNESCAH RIVER (LAT 37 22 19 LONG 097 18 09)											
NOV , 1976											
16...	131	136	8.2	3.5	--	--	261	69	80	15	199
372234097185100 - 31S 1E 9AAA NINNESCAH RIVER (LAT 37 22 34 LONG 097 18 51)											
NOV , 1976											
16...	126	1340	8.3	3.0	--	--	256	60	77	15	196
372304097190600 - 31S 1E 4DBB NINNESCAH RIVER (LAT 37 23 04 LONG 097 19 06)											
NOV , 1976											
16...	122	1420	8.3	2.0	--	--	254	62	77	15	191
372330097201700 - 30S 1E 32DCC NINNESCAH RIVER (LAT 37 23 30 LONG 097 20 17)											
NOV , 1976											
16...	120	1430	8.2	1.5	--	--	256	60	78	15	196

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
ARKANSAS RIVER BASIN											
371115097130000 - 33S 2E 16BAA SLATE CREEK (LAT 37 11 15 LONG 097 13 00)											
NOV , 1976 17...	57	6.3	9.1	325	0	266	8.2	314	580	--	9.5
371144097142400 - 33S 2E 8CBB SLATE CREEK (LAT 37 11 44 LONG 097 14 24)											
NOV , 1976 17...	27	1.6	9.2	317	0	260	8.0	87	78	--	8.9
371320094391100 - COW C NR LAWTON, KS (LAT 37 13 20 LONG 094 39 11)											
JUN , 1977 21...	14	.3	3.7	37	0	30	3.7	80	8.0	.1	5.1
371852097104200 - 31S 2E 35ABB NINNESCAH RIVER (LAT 37 18 52 LONG 097 10 42)											
NOV , 1976 17...	62	5.3	3.2	237	0	194	1.9	66	301	--	14
371934097125400 - 31S 2E 28BDD NINNESCAH RIVER (LAT 37 19 34 LONG 097 12 54)											
NOV , 1976 17...	62	5.4	3.2	237	0	194	2.4	63	304	--	14
372011097142500 - 31S 2E 20CCC NINNESCAH RIVER (LAT 37 20 11 LONG 097 14 25)											
NOV , 1976 17...	62	5.4	3.2	239	0	196	2.4	65	302	--	15
372103097152800 - 31S 2E 18CCC NINNESCAH RIVER (LAT 37 21 03 LONG 097 15 28)											
NOV , 1976 17...	62	5.4	3.2	239	0	196	3.0	65	307	--	15
372150097163400 - 31S 1E 12CCC NINNESCAH RIVER (LAT 37 21 50 LONG 097 16 34)											
NOV , 1976 16...	62	5.4	4.0	239	0	196	12	68	303	--	14
372219097180900 - 31S 1E 10ACC NINNESCAH RIVER (LAT 37 22 19 LONG 097 18 09)											
NOV , 1976 16...	62	5.4	3.2	234	0	192	1.9	64	307	--	14
372234097185100 - 31S 1E 9AAA NINNESCAH RIVER (LAT 37 22 34 LONG 097 18 51)											
NOV , 1976 16...	62	5.3	3.2	237	0	194	1.9	63	291	--	15
372304097190600 - 31S 1E 4DBB NINNESCAH RIVER (LAT 37 23 04 LONG 097 19 06)											
NOV , 1976 16...	62	5.2	3.2	234	0	192	1.9	63	289	--	15
372330097201700 - 30S 1E 32DCC NINNESCAH RIVER (LAT 37 23 30 LONG 097 20 17)											
NOV , 1976 16...	62	5.3	3.2	239	0	196	2.4	67	291	--	15

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
ARKANSAS RIVER BASIN											
371115097130000 - 33S 2E 16DAA SLATE CREEK (LAT 37 11 15 LONG 097 13 00)											
NOV , 1976 17...	--	1530	2.08	15.8	1.0	4.5	--	--	--	--	--
371144097142400 - 33S 2E 8CBB SLATE CREEK (LAT 37 11 44 LONG 097 14 24)											
NOV , 1976 17...	--	640	.87	6.45	1.9	8.6	--	--	--	--	--
371320094391100 - COW C NR LAWTON, KS (LAT 37 13 20 LONG 094 39 11)											
JUN , 1977 21...	--	145	.20	2860	.40	1.8	--	--	--	.48	--
371852097104200 - 31S 2E 35ABB NINNESCAH RIVER (LAT 37 18 52 LONG 097 10 42)											
NOV , 1976 17...	--	802	1.09	305	1.2	5.3	--	--	--	--	--
371934097125400 - 31S 2E 28BDD NINNESCAH RIVER (LAT 37 19 34 LONG 097 12 54)											
NOV , 1976 17...	--	801	1.09	281	1.2	5.3	--	--	--	--	--
372011097142500 - 31S 2E 20CCC NINNESCAH RIVER (LAT 37 20 11 LONG 097 14 25)											
NOV , 1976 17...	--	802	1.09	288	1.2	5.4	--	--	--	--	--
372103097152800 - 31S 2E 18CCC NINNESCAH RIVER (LAT 37 21 03 LONG 097 15 28)											
NOV , 1976 17...	--	809	1.10	288	1.2	5.5	--	--	--	--	--
372150097163400 - 31S 1E 12CCC NINNESCAH RIVER (LAT 37 21 50 LONG 097 16 34)											
NOV , 1976 16...	--	810	1.10	284	1.4	6.0	--	--	--	--	--
372219097180900 - 31S 1E 10ACC NINNESCAH RIVER (LAT 37 22 19 LONG 097 18 09)											
NOV , 1976 16...	--	803	1.09	284	1.2	5.3	--	--	--	--	--
372234097185100 - 31S 1E 9AAA NINNESCAH RIVER (LAT 37 22 34 LONG 097 18 51)											
NOV , 1976 16...	--	780	1.06	265	1.2	5.3	--	--	--	--	--
372304097190600 - 31S 1E 4DBB NINNESCAH RIVER (LAT 37 23 04 LONG 097 19 06)											
NOV , 1976 16...	--	774	1.05	255	1.2	5.4	--	--	--	--	--
372330097201700 - 30S 1E 32DCC NINNESCAH RIVER (LAT 37 23 30 LONG 097 20 17)											
NOV , 1976 16...	--	788	1.07	255	1.2	5.3	--	--	--	--	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
ARKANSAS RIVER BASIN											
372514097285100 - 30S 1E 29BBB WINNESCAH RIVER (LAT 37 25 14 LONG 097 28 51)											
NOV , 1976											
16...	122	1600	8.2	1.5	--	--	261	60	80	15	201
373512094383700 - COX C 1 MILE NW OF MULBERRY, KS (LAT 37 35 12 LONG 094 38 37)											
MAY , 1977											
17...	1.1	1220	7.3	25.0	--	8.9	640	540	170	51	28
AUG											
18...	.24	815	7.2	22.5	--	5.8	410	350	110	33	13
373747094380200 - COX C 1 MILE S OF ARCADIA, KS (LAT 37 37 47 LONG 094 38 02)											
NOV , 1976											
15...	1.8	3480	7.5	3.0	3	9.1	2300	2000	440	290	190
FEB , 1977											
14...	2.3	3800	7.0	3.0	5	11.2	--	--	--	--	--
MAY											
17...	10	950	6.8	20.0	--	7.5	410	350	95	41	36
AUG											
18...	8.8	2600	7.9	27.5	--	7.4	1300	1100	300	140	170
374109094370400 - COX C 2 MILES N OF ARCADIA, KS (LAT 37 41 09 LONG 094 37 04)											
NOV , 1976											
15...	1.6	3400	7.4	3.0	7	5.6	2200	2000	420	290	190
FEB , 1977											
14...	3.8	3750	7.4	2.0	9	10.3	--	--	--	--	--
MAY											
17...	61	1990	7.1	20.0	--	7.4	1000	950	220	120	88
AUG											
18...	13	2900	8.0	23.0	--	7.0	1600	1400	330	190	170
374139094385500 - N FK DRY WOOD C 3 MILES N OF ARCADIA, KS (LAT 37 41 39 LONG 094 38 55)											
NOV , 1976											
15...	1.1	330	7.2	4.0	3	2.2	190	12	62	9.1	6.5
FEB , 1977											
14...	2.6	370	7.3	2.5	10	3.8	--	--	--	--	--
MAY											
16...	.38	470	7.7	21.0	--	3.5	210	1	73	7.8	8.0
AUG											
18...	2.0	460	7.3	22.5	--	--	210	18	72	6.6	7.0
380223094393600 - INDIAN CK 4 MI SE OF PRESCOTT, KS (LAT 38 02 23 LONG 094 39 36)											
JUN , 1977											
08...	.46	660	7.4	19.0	--	7.8	350	170	100	25	18
380309094383100 - EAST FORK INDIAN CK 4 MI SW OF PRESCOTT, KS (LAT 38 03 09 LONG 094 38 31)											
JUN , 1977											
08...	1.7	1380	6.9	22.5	--	8.9	740	710	180	70	38
380401094383900 - INDIAN CK TRIB 3 MI EAST OF PRESCOTT, KS (LAT 38 04 01 LONG 094 38 39)											
JUN , 1977											
08...	1.9	1600	6.4	26.0	--	8.0	780	740	180	79	41
380551097431200 - 22S 4W 36BBB LITTLE ARKANSAS RIVER (LAT 38 05 51 LONG 097 43 12)											
NOV , 1976											
11...	2.0	950	7.8	3.5	--	--	482	114	128	20	75

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
ARKANSAS RIVER BASIN											
372514097205100 - 30S 1E 29888 NINNESCAH RIVER (LAT 37 25 14 LONG 097 20 51)											
NOV , 1976 16...	62	5.4	3.3	234	0	192	2.4	71	313	--	15
373512094383700 - COX C 1 MILE NW OF MULBERRY, KS (LAT 37 35 12 LONG 094 38 37)											
MAY , 1977 17...	9	.5	4.5	110	0	90	8.8	550	19	1.4	6.9
AUG 18...	6	.3	3.7	80	0	66	8.1	360	11	1.0	7.0
373747094380200 - COX C 1 MILE S OF ARCADIA, KS (LAT 37 37 47 LONG 094 38 02)											
NOV , 1976 15...	15	1.7	15	330	0	271	17	2400	17	1.8	10
FEB , 1977 14...	--	--	--	180	0	148	29	1600	15	.8	5.4
MAY 17...	16	.8	4.6	65	0	53	16	400	11	.6	6.8
AUG 18...	22	2.0	14	260	0	213	5.2	1400	16	.8	8.5
374109094370400 - COX C 2 MILES N OF ARCADIA, KS (LAT 37 41 09 LONG 094 37 04)											
NOV , 1976 15...	15	1.7	16	320	0	262	20	2400	16	.9	10
FEB , 1977 14...	--	--	--	180	0	148	11	1500	19	.8	5.9
MAY 17...	15	1.2	7.0	110	0	90	14	1100	15	.8	7.5
AUG 18...	19	1.8	14	260	0	213	4.2	1700	20	.9	8.0
374139094385500 - W FK DRY WOOD C 3 MILES N OF ARCADIA, KS (LAT 37 41 39 LONG 094 38 55)											
NOV , 1976 15...	7	.2	5.0	220	0	180	22	29	6.0	.3	8.2
FEB , 1977 14...	--	--	--	200	0	164	16	21	9.0	.2	7.0
MAY 16...	7	.2	4.6	260	0	213	8.3	25	13	.4	4.4
AUG 18...	7	.2	2.9	230	0	189	18	44	12	.1	8.7
380223094393600 - INDIAN CK 4 MI SE OF PRESCOTT, KS (LAT 38 02 23 LONG 094 39 36)											
JUN , 1977 08...	10	.4	4.1	220	0	180	14	290	11	.1	10
380309094383100 - EAST FORK INDIAN CK 4 MI SW OF PRESCOTT, KS (LAT 38 03 09 LONG 094 38 31)											
JUN , 1977 08...	10	.6	4.1	40	0	33	8.1	840	8.0	.1	6.1
380401094383900 - INDIAN CK TRIB 3 MI EAST OF PRESCOTT, KS (LAT 38 04 01 LONG 094 38 39)											
JUN , 1977 08...	10	.6	4.3	44	0	36	28	1000	8.0	.1	6.8
380551097431200 - 22S 4W 36888 LITTLE ARKANSAS RIVER (LAT 38 05 51 LONG 097 43 12)											
NOV , 1976 11...	28	1.6	6.4	351	0	288	8.9	114	115	--	22

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
ARKANSAS RIVER BASIN											
372514097205100 - 30S 1E 29BBB NINNESCAH RIVER (LAT 37 25 14 LONG 097 20 51)											
NOV , 1976 16...	--	820	1.12	279	1.2	5.5	--	--	--	--	--
373512094383700 - COX C 1 MILE NW OF MULBERRY, KS (LAT 37 35 12 LONG 094 38 37)											
MAY , 1977 17...	--	886	1.20	2.66	.10	.40	--	--	--	.04	--
AUG 18...	--	581	.79	.38	.30	1.3	--	--	--	.05	--
373747094380200 - COX C 1 MILE S OF ARCADIA, KS (LAT 37 37 47 LONG 094 38 02)											
NOV , 1976 15...	--	3530	4.80	17.2	.00	.00	--	--	--	--	--
FEB , 1977 14...	--	--	--	--	.11	.50	--	--	--	--	--
MAY 17...	--	633	.86	30.8	.80	3.5	--	--	--	.12	--
AUG 18...	--	2180	2.96	51.8	.30	1.3	--	--	--	.03	--
374109094370400 - COX C 2 MILES N OF ARCADIA, KS (LAT 37 41 09 LONG 094 37 04)											
NOV , 1976 15...	--	3500	4.76	15.1	.00	.00	--	--	--	--	--
FEB , 1977 14...	--	--	--	--	.18	.80	--	--	--	--	--
MAY 17...	--	1620	2.20	269	.60	2.7	--	--	--	.18	--
AUG 18...	--	2560	3.48	91.9	.20	.90	--	--	--	.03	--
374139094385500 - W FK DRY WOOD C 3 MILES N OF ARCADIA, KS (LAT 37 41 39 LONG 094 38 55)											
NOV , 1976 15...	--	237	.32	.70	.00	.00	--	--	--	--	--
FEB , 1977 14...	--	--	--	--	.07	.30	--	--	--	--	--
MAY 16...	--	268	.36	.27	.60	2.7	--	--	--	.15	--
AUG 18...	--	268	.36	1.46	.10	.40	--	--	--	.09	--
380223094393600 - INDIAN CK 4 MI SE OF PRESCOTT, KS (LAT 38 02 23 LONG 094 39 36)											
JUN , 1977 08...	--	568	.77	.71	.20	.90	--	--	--	.11	--
380309094383100 - EAST FORK INDIAN CK 4 MI SW OF PRESCOTT, KS (LAT 38 03 09 LONG 094 38 31)											
JUN , 1977 08...	--	1170	1.59	5.37	.30	1.3	--	--	--	.01	--
380401094383900 - INDIAN CK TRIB 3 MI EAST OF PRESCOTT, KS (LAT 38 04 01 LONG 094 38 39)											
JUN , 1977 08...	--	1350	1.84	6.93	.10	.40	--	--	--	.01	--
380551097431200 - 22S 4W 36BBB LITTLE ARKANSAS RIVER (LAT 38 05 51 LONG 097 43 12)											
NOV , 1976 11...	--	658	.89	3.71	.93	4.1	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)
ARKANSAS RIVER BASIN											
380552097433100 - 22S 3W 31BCC LITTLE ARKANSAS RIVER (LAT 38 05 52 LONG 097 43 31)											
NOV , 1976 16...	2.2	850	7.8	3.0	--	--	370	76	117	19	68
380600097402000 - 22S 3W 30DDD LITTLE ARKANSAS RIVER (LAT 38 06 00 LONG 097 40 20)											
NOV , 1976 16...	2.2	820	7.8	2.0	--	--	358	66	112	19	66
380619097442800 - 22S 4W 26CCC LITTLE ARKANSAS RIVER (LAT 38 06 19 LONG 097 44 28)											
NOV , 1976 16...	1.9	1040	7.7	4.0	--	--	438	158	136	24	79
380654097364900 - 22S 3W 25BBB LITTLE ARKANSAS RIVER (LAT 38 06 54 LONG 097 36 49)											
NOV , 1976 16...	2.4	720	7.9	1.5	--	--	345	45	107	19	56
380655097394000 - 22S 3W 29ABB LITTLE ARKANSAS RIVER (LAT 38 06 55 LONG 097 39 40)											
NOV , 1976 16...	2.1	790	7.8	2.0	--	--	340	38	107	18	62
380657097452000 - 22S 4W 21DDD LITTLE ARKANSAS RIVER (LAT 38 06 57 LONG 097 45 20)											
NOV , 1976 16...	2.1	1550	7.3	4.5	--	--	723	489	232	35	136
380713097374000 - 22S 3W 23DDD LITTLE ARKANSAS RIVER (LAT 38 07 13 LONG 097 37 40)											
NOV , 1976 16...	2.4	800	7.9	1.5	--	--	337	33	107	17	58
380742097473600 - 22S 4W 20BBB LITTLE ARKANSAS RIVER (LAT 38 07 42 LONG 097 47 36)											
NOV , 1976 16...	1.7	2200	7.7	3.0	--	--	1000	786	320	49	180
380810097482700 - 22S 4W 13DAA LITTLE ARKANSAS RIVER (LAT 38 08 10 LONG 097 48 27)											
NOV , 1976 16...	2.2	2150	7.9	2.0	--	--	953	733	305	46	175
380828097494800 - 22S 5W 13BBB LITTLE ARKANSAS RIVER (LAT 38 08 28 LONG 097 49 48)											
NOV , 1976 16...	.97	840	7.6	1.5	--	--	374	36	112	23	65
380921097505600 - 22S 5W 11DDD LITTLE ARKANSAS RIVER (LAT 38 09 21 LONG 097 50 56)											
NOV , 1976 16...	.78	810	7.9	1.0	--	--	346	0	104	21	70
381208097520000 - 21S 5W 27BBB LITTLE ARKANSAS RIVER (LAT 38 12 08 LONG 097 52 00)											
NOV , 1976 16...	.72	900	7.7	1.0	--	--	364	0	106	24	75

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
ARKANSAS RIVER BASIN											
380552097433100 - 22S 3W 31BCC LITTLE ARKANSAS RIVER (LAT 38 05 52 LONG 097 43 31)											
NOV , 1976 16...	28	1.5	6.3	359	0	294	9.1	93	95	--	22
380600097402000 - 22S 3W 30DDD LITTLE ARKANSAS RIVER (LAT 38 06 00 LONG 097 40 20)											
NOV , 1976 16...	28	1.5	6.3	356	0	292	9.0	83	91	--	22
380619097442800 - 22S 4W 26CCC LITTLE ARKANSAS RIVER (LAT 38 06 19 LONG 097 44 28)											
NOV , 1976 16...	28	1.6	6.4	342	0	280	11	136	136	--	23
380654097364900 - 22S 3W 25BBB LITTLE ARKANSAS RIVER (LAT 38 06 54 LONG 097 36 49)											
NOV , 1976 16...	26	1.3	6.8	366	0	300	7.4	67	73	--	22
380655097394000 - 22S 3W 29ABB LITTLE ARKANSAS RIVER (LAT 38 06 55 LONG 097 39 40)											
NOV , 1976 16...	28	1.5	6.4	368	0	302	9.3	71	80	--	22
380657097452000 - 22S 4W 21DDD LITTLE ARKANSAS RIVER (LAT 38 06 57 LONG 097 45 20)											
NOV , 1976 16...	29	2.2	8.3	285	0	234	23	365	295	--	27
380713097374000 - 22S 3W 23DDD LITTLE ARKANSAS RIVER (LAT 38 07 13 LONG 097 37 40)											
NOV , 1976 16...	27	1.4	6.6	371	0	304	7.5	65	73	--	22
380742097473600 - 22S 4W 20BBB LITTLE ARKANSAS RIVER (LAT 38 07 42 LONG 097 47 36)											
NOV , 1976 16...	28	2.5	8.2	261	0	214	8.3	530	428	--	34
380810097482700 - 22S 4W 13DAA LITTLE ARKANSAS RIVER (LAT 38 08 10 LONG 097 48 27)											
NOV , 1976 16...	28	2.5	7.9	268	0	220	5.4	531	487	--	34
380828097494800 - 22S 5W 13BBB LITTLE ARKANSAS RIVER (LAT 38 08 28 LONG 097 49 48)											
NOV , 1976 16...	27	1.5	5.0	412	0	338	17	67	75	--	23
380921097505600 - 22S 5W 11BDD LITTLE ARKANSAS RIVER (LAT 38 09 21 LONG 097 50 56)											
NOV , 1976 16...	30	1.6	5.3	429	0	3520	8.6	60	66	--	21
381208097520000 - 21S 5W 27BBB LITTLE ARKANSAS RIVER (LAT 38 12 08 LONG 097 52 00)											
NOV , 1976 16...	30	1.7	7.4	461	0	378	15	51	72	--	20

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
ARKANSAS RIVER BASIN											
380552097433100 - 22S 3W 31BCC LITTLE ARKANSAS RIVER (LAT 38 05 52 LONG 097 43 31)											
NOV , 1976											
16...	--	601	.82	3.73	.75	3.3	--	--	--	--	--
380600097402000 - 22S 3W 30DDD LITTLE ARKANSAS RIVER (LAT 38 06 00 LONG 097 40 20)											
NOV , 1976											
16...	--	577	.78	3.54	.38	1.7	--	--	--	--	--
380619097442800 - 22S 4W 26CCC LITTLE ARKANSAS RIVER (LAT 38 06 19 LONG 097 44 28)											
NOV , 1976											
16...	--	713	.97	3.76	1.1	4.9	--	--	--	--	--
380654097364900 - 22S 3W 25BAB LITTLE ARKANSAS RIVER (LAT 38 06 54 LONG 097 36 49)											
NOV , 1976											
16...	--	532	.72	3.55	.00	.00	--	--	--	--	--
380655097394000 - 22S 3W 29ABB LITTLE ARKANSAS RIVER (LAT 38 06 55 LONG 097 39 40)											
NOV , 1976											
16...	--	548	.75	3.14	.14	.60	--	--	--	--	--
380657097452000 - 22S 4W 21DDD LITTLE ARKANSAS RIVER (LAT 38 06 57 LONG 097 45 20)											
NOV , 1976											
16...	--	1270	1.73	7.48	1.2	5.4	--	--	--	--	--
380713097374000 - 22S 3W 23DDD LITTLE ARKANSAS RIVER (LAT 38 07 13 LONG 097 37 40)											
NOV , 1976											
16...	--	532	.72	3.45	.02	.10	--	--	--	--	--
380742097473600 - 22S 4W 20BBB LITTLE ARKANSAS RIVER (LAT 38 07 42 LONG 097 47 36)											
NOV , 1976											
16...	--	1680	2.28	8.06	.14	.60	--	--	--	--	--
380810097482700 - 22S 4W 13DAA LITTLE ARKANSAS RIVER (LAT 38 08 10 LONG 097 48 27)											
NOV , 1976											
16...	--	1640	2.23	10.0	.23	1.0	--	--	--	--	--
380828097494800 - 22S 5W 13BBB LITTLE ARKANSAS RIVER (LAT 38 08 28 LONG 097 49 48)											
NOV , 1976											
16...	--	574	.78	1.51	.16	.70	--	--	--	--	--
380921097505600 - 22S 5W 11BDD LITTLE ARKANSAS RIVER (LAT 38 09 21 LONG 097 50 56)											
NOV , 1976											
16...	--	559	.76	1.18	.00	.00	--	--	--	--	--
381208097520000 - 21S 5W 27BBB LITTLE ARKANSAS RIVER (LAT 38 12 08 LONG 097 52 00)											
NOV , 1976											
16...	--	582	.79	1.13	.00	.00	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)
BIG NEMAHA RIVER BASIN											
06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)											
MAY , 1977 25...	4	--	2	<10	--	0	0	--	10	<50	--
WOLF RIVER BASIN											
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)											
MAY , 1977 26...	6	3	3	<10	<10	0	0	0	0	<50	<50
KANSAS RIVER BASIN											
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)											
MAY , 1977 25...	5	1	4	<10	<9	1	0	0	0	<50	<50
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)											
MAY , 1977 25...	4	2	2	<10	<9	1	0	0	0	<50	<50

DATE	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)
BIG NEMAHA RIVER BASIN											
06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)											
MAY , 1977 25...	0	20	--	3	21000	90	<100	--	1	30	1200
WOLF RIVER BASIN											
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)											
MAY , 1977 26...	0	<10	<7	3	3700	20	<100	<98	2	20	270
KANSAS RIVER BASIN											
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)											
MAY , 1977 25...	0	<10	<6	2	1800	30	<100	<95	5	170	310
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)											
MAY , 1977 25...	0	<10	<6	4	2700	310	<100	<95	5	80	220

DATE	SUS-PENDED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
BIG NEMAHA RIVER BASIN										
06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)										
MAY , 1977 25...	1200	.0	.0	.0	<50	2	1	1	100	30
WOLF RIVER BASIN										
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)										
MAY , 1977 26...	250	.0	.0	.0	<50	1	0	1	20	10
KANSAS RIVER BASIN										
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)										
MAY , 1977 25...	140	.0	.0	.0	<50	1	0	1	0	10
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)										
MAY , 1977 25...	140	.0	.0	.0	<50	1	0	1	10	10

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	LOSS ON IGNI- TION IN BOTTOM MA- TERIAL (MG/KG)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)	TOTAL KJEL. NITRO- GEN IN BOTTOM MAT. (MG/KG)	TOTAL NITRO- GEN IN BOTTOM MATERI- AL (N) (MG/KG)	TOTAL PHOS- PHORUS IN BOT- TOM MA- TERIAL (MG/KG)	ORGANIC CARBON IN BOT- TOM MA- TERIAL (C) (G/KG)
WOLF RIVER BASIN						
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)						
MAY , 1977 26...	19900	14	550	700	5	2.8
KANSAS RIVER BASIN						
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)						
MAY , 1977 25...	49800	8.0	700	720	6	9.6
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)						
MAY , 1977 25...	22700	8.0	420	490	4	2.6

DATE	TOTAL ARSENIC IN BOTTOM MA- TERIAL (UG/G)	TOTAL CADMIUM IN BOTTOM MA- TERIAL (UG/G)	TOTAL CHRO- MIUM IN BOTTOM MA- TERIAL (UG/G)	TOTAL COBALT IN BOTTOM MA- TERIAL (UG/G)	TOTAL COPPER IN BOTTOM MA- TERIAL (UG/G)	TOTAL IRON IN BOTTOM MA- TERIAL (UG/G)	TOTAL LEAD IN BOTTOM MA- TERIAL (UG/G)	TOTAL MANGA- NESE IN BOTTOM MA- TERIAL (UG/G)	TOTAL NICKEL IN BOTTOM MA- TERIAL (UG/G)	TOTAL SELE- NIUM IN BOTTOM MA- TERIAL (UG/G)	TOTAL ZINC IN BOTTOM MA- TERIAL (UG/G)
WOLF RIVER BASIN											
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)											
MAY , 1977 26...	2	<1	9	15	4	84000	15	200	10	0	13
KANSAS RIVER BASIN											
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)											
MAY , 1977 25...	2	<1	9	25	14	140000	30	160	15	0	27
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)											
MAY , 1977 25...	5	<1	9	50	13	170000	50	190	30	0	20

DATE	POLY- CHLO- RINATED NAPH- THA- LENES (UG/L)	TOTAL PCB (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLOR- DANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)
WOLF RIVER BASIN							
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)							
MAY , 1977 26...	.00	.0	.00	.0	.01	.01	.20

DATE	TOTAL DI- ELDRIN (UG/L)	TOTAL ENDO- SULFAN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL HEPTA- CHLOR (UG/L)	TOTAL HEPTA- CHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL TOX- APHENE (UG/L)
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)							
MAY , 1977 26...	.10	.00	.00	.00	.03	.00	0

DATE	ALDRIN IN BOTTOM MA- TERIAL (UG/KG)	CHLOR- DANE IN BOTTOM MA- TERIAL (UG/KG)	DDD IN BOTTOM MA- TERIAL (UG/KG)	DDE IN BOTTOM MA- TERIAL (UG/KG)	DDT IN BOTTOM MA- TERIAL (UG/KG)	DI- ELDRIN IN BOTTOM MA- TERIAL (UG/KG)	ENDRIN IN BOTTOM MA- TERIAL (UG/KG)	HEPTA- CHLOR IN BOTTOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE IN BOT- TOM MA- TERIAL (UG/KG)	LINDANE IN BOTTOM MA- TERIAL (UG/KG)	TOX- APHENE IN BOTTOM MA- TERIAL (UG/KG)
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)											
MAY , 1977 26...	.0	0	.1	.4	2.1	1.5	.0	.0	.2	.0	0

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

BIG NEMAHA RIVER BASIN

06815274 - WALNUT C NR FAIRVIEW, KS (LAT 39 50 17 LONG 095 38 20)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY , 1977					
19...	1500	170	310	25400	11700
20...	0855	307	240	2370	1920
21...	1400	190	240	1980	1020
JUL					
11...	1705	36	1000	146	14
AUG					
16...	0400	170	470	4980	2290
16...	1750	48	270	523	68
30...	0845	40	300	177	19
SEP					
01...	1225	92	250	813	202
01...	1925	180	250	589	286
02...	0825	850	250	3030	6950
02...	1325	245	220	1050	695
03...	1115	235	195	751	477
12...	1610	560	220	2440	3690
13...	1400	325	190	947	831

06815288 - WALNUT C NR HAMLIN, KS (LAT 39 53 58 LONG 095 35 35)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY , 1977					
19...	1600	1100	340	15200	45100
20...	1015	899	250	3540	8590
20...	1110	869	260	3450	8100
23...	1700	220	260	1460	867
23...	1720	399	250	1520	1640
23...	1810	394	240	2890	3070
JUL					
11...	1740	60	400	785	127
AUG					
06...	0100	510	310	16400	22600
06...	1420	300	350	2710	2200
16...	0500	190	250	5690	2920
16...	0700	1100	300	6400	19000
16...	1715	185	240	1160	579
SEP					
02...	1910	500	230	1460	1970
02...	1950	315	220	2020	1720
03...	1050	640	240	1750	3020
13...	1010	920	225	2430	6040
13...	1425	815	220	1890	4160

06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY , 1977					
20...	1200	2900	--	2650	20700
20...	1710	1700	240	2500	11500
20...	1750	1590	240	2560	11000
21...	1440	18	250	2840	138
21...	1525	18	200	2700	131
23...	1605	445	245	1810	2180
26...	1330	60	320	799	129
JUL					
11...	1805	36	325	684	66
AUG					
16...	1620	555	240	2190	3280
16...	1710	415	240	2040	2290
16...	1810	255	270	1060	730
30...	1025	85	325	378	87
SEP					
02...	0850	430	260	3350	3890
03...	1150	1750	200	1820	8600
12...	1540	1950	190	3180	16700
12...	1730	4500	160	1850	22500
13...	1455	2750	200	1040	7720

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WOLF RIVER BASIN

06815578 - WOLF R AT HIAWATHA, KS (LAT 39 47 34 LONG 095 31 36)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY , 1977					
19...	1500	68	--	4960	911
20...	0925	30	--	1850	150
20...	1000	30	--	1680	136
30...	1425	18	280	1070	52
JUN					
21...	1740	32	150	7580	655
22...	1000	20	200	1140	62
JUL					
11...	1300	18	200	1430	69
11...	1310	20	370	1500	81
AUG					
06...	0815	44	200	3730	443
06...	1310	30	160	2080	168
09...	0830	20	2100	1540	83
11...	0930	70	180	3180	601
16...	0830	52	160	19	2.7
16...	1430	34	150	1100	101
16...	1610	28	140	920	70
28...	1100	68	140	2680	492
28...	1615	32	150	726	63
SEP					
01...	0300	68	--	22600	4150
01...	0820	25	165	825	56
01...	1110	22	170	60	3.6
01...	1210	22	175	463	28
01...	1630	20	185	284	15
02...	1550	60	140	2230	361
02...	1610	55	125	1970	293
02...	1645	44	155	2710	322
02...	1740	40	140	1570	170
03...	0900	.50	140	1880	2.5
03...	1350	35	14	1070	101
13...	1340	34	190	7130	655
13...	1755	28	225	642	49
21...	1000	54	250	4300	627
21...	1630	35	240	2000	189
24...	0245	68	200	62	11
24...	1700	26	260	3370	237

06815700 - BUTTERMILK C NR WILLIS, KS (LAT 39 45 16 LONG 095 27 02)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY , 1977					
19...	1400	76	280	95	19
30...	1445	6.0	300	152	2.5
JUN					
21...	1750	340	175	10800	9910
21...	2300	76	270	4430	909
22...	1100	48	115	920	119
22...	1900	76	150	1040	213
24...	0930	270	70	7690	5610
JUL					
11...	1020	20	140	3340	180
11...	1210	50	115	2290	309
AUG					
06...	0840	30	250	1440	117
06...	1400	8.0	250	448	9.7
06...	2200	76	175	5870	1210
11...	1000	6.0	240	295	4.8
16...	0200	76	--	3980	817
16...	0855	80	120	1050	227
16...	1500	10	180	645	17
16...	1630	80	140	529	114
28...	0200	76	--	1200	246
28...	1115	95	130	637	163
28...	1630	8.0	250	14	.30
SEP					
01...	0830	42	125	444	50
01...	1200	15	150	321	13
01...	1505	10	150	383	10
01...	1610	10	160	225	6.1
01...	2200	76	--	1640	337
02...	0840	330	115	4220	3760
02...	1025	200	110	18	9.7
02...	1245	120	105	1310	424
02...	1710	52	145	486	68
03...	0915	110	135	491	146
03...	1325	30	155	334	27
12...	0100	510	85	3350	4610
12...	0200	1700	80	6230	28600
12...	1100	380	70	3390	3480
12...	1730	90	115	737	179
13...	0845	42	185	1620	184
13...	0900	90	120	551	134
13...	1825	25	165	266	18
24...	1020	8.0	175	1630	35
24...	1620	115	195	562	175

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WOLF RIVER BASIN

06815800 - WOLF R AT LEONA, KS (LAT 39 46 53 LONG 095 19 16)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY , 1977					
20...	1440	423	250	2610	2980
21...	1130	210	300	3800	2160
JUN					
21...	0300	620	280	5060	8470
JUL					
11...	1505	295	250	4870	3880
AUG					
06...	1425	410	200	2940	3260
16...	0300	620	195	2630	4400
16...	0400	2000	180	9560	51600
16...	1530	450	200	2260	2750
SEP					
01...	1140	330	--	20	18
01...	1745	125	2300	1040	351
02...	1310	4520	185	65	793
02...	1415	3760	180	5010	50900
02...	1755	1270	170	4200	14400
12...	0300	620	130	1780	2980
12...	0400	2000	190	5560	30000
13...	1405	1040	225	4530	12700

06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY , 1977					
19...	1700	470	230	23500	29800
19...	1800	3400	--	61700	566000
20...	0930	1800	200	7030	34200
20...	1435	870	200	4260	10000
20...	1530	780	220	3800	8000
20...	1730	610	240	3240	5340
21...	0940	340	240	12200	11200
21...	1830	320	270	3220	2780
22...	0830	240	250	4340	2810
29...	1600	640	260	11800	20400
30...	1000	59	240	2130	339
JUN					
21...	0100	470	--	34700	44000
21...	0130	1600	--	32800	142000
21...	0800	2300	170	18800	117000
22...	1330	240	250	4050	2620
23...	1130	32	25	1020	88
JUL					
11...	1610	290	175	4620	3620
AUG					
06...	1530	720	200	4910	9550
11...	1000	2400	200	8190	53100
16...	0400	470	170	1470	1870
16...	0900	1520	175	8770	36000
16...	1530	1020	200	3050	8400
16...	1600	950	200	3110	7980
30...	1430	44	300	84	10
SEP					
01...	0900	1590	--	5000	21500
01...	1050	1070	225	3960	11400
01...	1300	730	200	3050	6010
01...	1637	470	210	1960	2490
01...	1707	450	220	19	23
02...	1500	4350	200	1610	18900
02...	1605	4170	180	6760	76100
02...	1850	2310	160	4060	25300
02...	1930	2000	150	3500	18900
02...	2000	900	--	1920	4670
12...	0400	470	20	2280	2890
12...	0500	3400	150	6220	57100
13...	1300	2240	--	5950	36000
13...	1335	1970	185	8070	42900
13...	2000	840	--	3480	7890
14...	0900	300	--	1540	1250

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
WOLF RIVER BASIN					
06815000 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)					
SEP , 1977					
14...	1300	250	--	114	77
14...	1900	175	350	916	433
15...	1730	440	390	7480	8890
KANSAS RIVER BASIN					
06855800 - BUFFALO C NR JAMESTOWN, KS (LAT 39 36 55 LONG 097 51 20)					
JUN , 1977					
13...	1400	312	250	6680	5630
AUG					
16...	1945	2840	140	2080	15900
06856100 - WEST C NR TALMO, KS (LAT 39 40 08 LONG 097 36 48)					
JUN , 1977					
13...	1530	146	250	7180	2830
06860500 - HACKBERRY C NR GOVE, KS (LAT 38 57 15 LONG 100 29 05)					
AUG , 1977					
24...	1445	733	157	1440	2850
06861000 - SMOKY HILL R NR ARNOLD, KS (LAT 38 48 31 LONG 100 01 13)					
APR , 1977					
22...	1605	38	1100	10100	1040
AUG					
05...	1320	2360	--	18300	117000
06...	1430	310	--	5840	4890
06864050 - SMOKY HILL R NR BUNKER HILL, KS (LAT 38 47 38 LONG 098 46 50)					
MAY , 1977					
09...	1435	1060	--	3040	8700
06866490 - DRY C AT MENTOR, KS (LAT 38 44 11 LONG 097 36 46)					
SEP , 1977					
01...	1130	1910	90	1880	9700
06876700 - SALT C NR ADA, KS (LAT 39 08 30 LONG 097 50 10)					
OCT , 1976					
04...	1005	985	230	7790	20700
MAY , 1977					
31...	1300	945	280	1080	2760
06877500 - TURKEY C NR ABILENE, KS (LAT 38 48 22 LONG 097 10 53)					
MAY , 1977					
31...	1345	583	420	2110	3320
06878000 - CHAPMAN C NR CHAPMAN, KS (LAT 39 01 52 LONG 097 02 24)					
JUN , 1977					
18...	1610	10130	182	2400	65600
06886500 - FANCY C AT WINKLER, KS (LAT 39 28 20 LONG 096 49 55)					
AUG , 1977					
23...	1200	2240	176	3320	20100

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
KANSAS RIVER BASIN					
06889100 - SOLDIER C NR GOFF, KS (LAT 39 37 27 LONG 095 57 57)					
MAY , 1977					
19...	1550	329	128	7100	6310
19...	1620	331	110	5440	4860
19...	1845	508	76	4520	6200
20...	1640	2760	220	3850	22700
AUG					
31...	1815	106	130	21900	6270
06889120 - SOLDIER C NR BANCROFT, KS (LAT 39 35 42 LONG 095 58 17)					
MAY , 1977					
19...	1630	704	220	9080	17300
19...	1720	1300	169	10200	35800
19...	2015	1540	143	6000	24900
20...	1200	18	260	754	37
AUG					
31...	1930	406	260	2540	2780
SEP					
14...	1100	11	425	150	4.7
06889140 - SOLDIER C NR SOLDIER, KS (LAT 39 33 57 LONG 095 57 45)					
MAY , 1977					
19...	2045	2020	164	6770	36900
20...	1050	39	230	844	89
SEP					
14...	1510	14	450	1030	40
06889160 - SOLDIER C NR CIRCLEVILLE, KS (LAT 39 27 47 LONG 095 57 08)					
MAY , 1977					
20...	1430	106	260	1410	404
SEP					
14...	1800	54	450	197	29
06889180 - SOLDIER C NR ST. CLERE, KS (LAT 39 22 33 LONG 095 55 05)					
SEP , 1977					
15...	0945	109	550	426	125
06889500 - SOLDIER C NR TOPEKA, KS (LAT 39 06 00 LONG 095 43 27)					
SEP , 1977					
14...	1240	5450	230	2200	32400

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

KANSAS RIVER BASIN

06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
MAY , 1977					
19...	1500	210	350	4080	2310
20...	1900	90	220	905	220
20...	1930	85	200	627	144
23...	1510	6.0	360	185	3.0
30...	1400	10	260	439	12
JUN					
21...	1815	4.0	220	2730	29
22...	0200	64	175	11200	1940
22...	0300	210	250	10700	6070
22...	0400	400	--	4440	4800
22...	1000	23	220	791	49
JUL					
11...	1045	22	190	1760	105
11...	1500	8.0	225	1070	23
AUG					
06...	0710	145	180	1070	419
06...	1100	10	300	2980	80
06...	1245	2.0	180	1300	7.0
09...	0800	24	240	349	23
11...	0845	2.0	180	557	3.0
12...	1415	4.0	250	266	2.9
16...	0745	15	160	826	33
16...	1320	32	220	981	85
16...	1355	42	270	1420	161
16...	1725	52	200	674	95
16...	2005	44	210	469	56
17...	0845	14	225	311	12
22...	1605	134	180	659	238
27...	1550	20	70	281	15
28...	1145	145	200	867	339
29...	0915	112	200	338	102
29...	1550	23	225	200	12
SEP					
01...	0800	150	200	525	213
01...	1400	80	200	344	74
01...	1503	68	175	334	61
01...	1655	52	200	294	41
02...	0755	155	155	1820	762
02...	0940	350	130	2550	2410
02...	1120	400	180	2260	2440
02...	1200	410	190	1820	2020
02...	1350	400	150	1090	1180
02...	1625	295	150	828	659
02...	1655	275	150	844	627

06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
SEP , 1977					
02...	1745	284	165	808	620
02...	1815	240	135	804	521
03...	0940	320	330	747	645
03...	1555	225	195	637	387
03...	1700	815	135	3290	7240
04...	1015	255	120	582	401
05...	0950	165	145	307	137
06...	0935	235	115	347	220
07...	1805	280	120	568	429
12...	0600	1300	130	1310	4600
12...	0700	250	170	1270	857
12...	0800	520	130	2700	3790
12...	1400	1340	115	951	3440
12...	1500	1330	140	9500	34100
12...	1550	1270	135	1300	4460
13...	0830	460	105	658	817
13...	1240	305	110	683	562
13...	1317	412	130	640	712
13...	1850	250	115	589	398
14...	0900	210	110	510	289
15...	1110	195	155	297	156
24...	0915	245	150	1140	754
24...	1730	92	160	656	163

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
KANSAS RIVER BASIN					
06890094 - L GRASSHOPPER C NR EFFINGHAM, KS (LAT 39 35 00 LONG 095 25 26)					
MAY , 1977					
06...	1225	12	200	5580	181
19...	1500	230	160	3130	1940
19...	1600	400	220	7350	7940
19...	1700	810	170	4790	10500
23...	1600	9.0	340	362	8.8
JUL					
11...	1335	62	125	2440	408
AUG					
06...	1645	15	--	916	37
16...	1240	68	160	1270	233
16...	1415	48	170	1300	168
28...	0100	230	--	1200	745
28...	0200	400	105	1430	1540
28...	0300	810	130	1270	2780
SEP					
01...	1400	78	165	524	110
12...	0100	230	140	2650	1650
12...	0200	400	120	2140	2310
12...	0300	810	110	1850	4050
13...	1130	700	150	599	1130
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)					
MAY , 1977					
06...	1055	44	200	8900	1060
06...	1130	39	190	8380	882
19...	0600	990	250	12200	32600
19...	0630	1500	--	1460	5910
JUL					
11...	1215	150	125	2630	1070
11...	1410	200	100	1070	578
11...	1430	220	175	4470	2660
11...	1540	210	175	3990	2260
AUG					
06...	1150	305	135	3040	2500
06...	1310	220	--	2420	1440
06...	1545	80	--	2540	549
16...	1215	80	160	1190	257
16...	1345	78	200	1060	223
16...	2030	52	220	1090	153
SEP					
01...	1220	1400	120	1310	4950
01...	1310	1300	170	1580	5550
01...	1515	935	165	1190	3000
12...	0530	540	100	5350	7800
12...	0600	990	130	4150	11100
12...	0630	1500	1900	1770	7170
12...	1205	3980	112	1560	16800
12...	1345	4500	1300	1480	18000
13...	0830	4600	120	1000	12400
13...	1107	5500	105	869	12900
06890100 - DELAWARE R NR MUSCOTAH, KS (LAT 39 31 17 LONG 095 31 57)					
MAY , 1977					
23...	1035	21	--	71	4.1
SEP					
01...	1600	9200	155	2180	54200

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
KANSAS RIVER BASIN					
06890460 - COAL C NR HALF MOUND, KS (LAT 39 23 27 LONG 095 28 45)					
MAY , 1977					
06...	1505	5.0	285	220	3.0
17...	1800	250	190	8630	5830
23...	1115	42	250	1110	126
23...	1150	42	--	820	93
23...	1215	35	260	1040	98
23...	1305	30	260	855	69
AUG					
06...	1210	57	--	1770	272
16...	0600	18	320	5260	256
16...	0852	135	165	2110	769
16...	1110	90	177	2070	503
16...	1145	88	175	1920	456
16...	1310	76	270	1650	339
16...	2100	88	180	620	147
SEP					
01...	1005	315	185	1020	868
01...	1035	285	180	910	700
12...	0530	18	180	5600	272
12...	0600	140	140	6900	2610
12...	1045	860	130	7240	16800
12...	1130	925	125	6530	11300
06891080 - KANSAS R AT LAWRENCE, KS (LAT 38 58 31 LONG 095 14 08)					
JUN , 1977					
22...	1100	--	--	3180	--
22...	1105	--	--	3350	--
22...	1110	--	--	3300	--
22...	1115	--	--	3060	--
22...	1120	--	--	2810	--
22...	1125	--	--	3510	--
22...	1130	--	--	3030	--
22...	1200	--	--	3390	--
22...	1205	--	--	3570	--
22...	1210	--	--	3750	--
22...	1215	--	--	3530	--
22...	1220	--	--	3460	--
22...	1225	--	--	3210	--
22...	1300	--	--	2920	--
22...	1305	--	--	3920	--
22...	1310	--	--	4200	--
22...	1315	--	--	3960	--
22...	1320	--	--	3840	--
22...	1325	--	--	3800	--
22...	1330	--	--	3700	--
22...	1335	--	--	3710	--
24...	0930	--	--	1770	--
24...	0935	--	--	1730	--
24...	0940	--	--	1690	--
24...	0945	--	--	1690	--
24...	0950	--	--	1720	--
24...	0955	--	--	1700	--
24...	1000	--	--	2130	--
24...	1005	--	--	2090	--
24...	1010	--	--	1870	--
24...	1015	--	--	1800	--
24...	1020	--	--	1840	--
24...	1030	--	--	1570	--
24...	1035	--	--	1770	--
24...	1040	--	--	1690	--
24...	1045	--	--	1780	--
24...	1050	--	--	1670	--
24...	1100	--	--	1190	--
24...	1105	--	--	2480	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
ARKANSAS RIVER BASIN					
07138600 - WHITEWOMAN C TR NR SELKIRK, KS (LAT 38 31 30 LONG 101 37 16)					
MAY , 1977					
27...	1230	.83	150	612	1.4
AUG					
10...	1325	14	161	1030	39
07139700 - ARKANSAS R TR NR DODGE CITY, KS (LAT 37 42 52 LONG 100 00 53)					
AUG , 1977					
19...	1330	370	--	1270	1300
07140300 - WHITEWOMAN C NR BELLEFONT, KS (LAT 37 55 26 LONG 099 30 31)					
AUG , 1977					
11...	1530	34	94	870	80
07140600 - PAWNEE R TR NR KALVESTA, KS (LAT 38 03 42 LONG 100 21 00)					
AUG , 1977					
06...	0945	8.4	135	976	22
07142100 - RATTLESNAKE C TR NR MULLINVILLE, KS (LAT 37 35 11 LONG 099 25 17)					
MAY , 1977					
23...	1330	86	72	892	207
07142620 - RATTLESNAKE C NR RAYMOND, KS (LAT 38 13 50 LONG 098 25 00)					
FEB , 1977					
15...	1150	49	4400	224	30
07145300 - CLEAR C NR GARDEN PLAIN, KS (LAT 37 39 40 LONG 097 39 22)					
AUG , 1977					
19...	1545	52	167	306	44
07148100 - BROUSE C NR DEXTER, KS (LAT 37 13 38 LONG 096 42 44)					
JUN , 1977					
22...	1730	15000	130	858	34700
07155590 - CIMARRON R NR ELKHART, KS (LAT 37 07 30 LONG 101 53 50)					
APR , 1977					
22...	1425	129	640	5440	1900
MAY					
12...	1230	6.2	420	532	8.9
15...	1305	460	380	12100	15300
15...	1340	3240	530	30000	262000
15...	1640	1470	510	28800	114000
SEP					
08...	1305	32	900	3530	307
07156000 - NF CIMARRON R TR NR RICHFIELD, KS (LAT 37 10 36 LONG 101 46 18)					
MAY , 1977					
19...	1340	78	--	3510	739

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ARKANSAS RIVER BASIN

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
07183500 - NEOSHO R NR PARSONS, KS (LAT. 37 10 39 LONG 095 06 37)					
OCT , 1976					
20...	1400	40	600	76	8.4
NOV					
16...	0905	43	540	11	1.3
DEC					
21...	0935	50	600	15	2.0
JAN , 1977					
10...	1230	55	640	7	1.0
FEB					
15...	1515	83	600	10	2.3
MAR					
15...	1720	140	620	29	11
APR					
26...	1020	140	510	43	16
JUN					
08...	1100	7200	275	262	5090
JUL					
20...	0935	2460	400	149	990
AUG					
31...	1005	3510	250	165	1560
07184600 - FLY C NR FAULKNER, KS (LAT 37 06 15 LONG 094 56 21)					
JUN , 1977					
22...	1350	1590	45	239	1030
371320094391100 - COW C NR LAWTON, KS (LAT 37 13 20 LONG 094 39 11)					
JUN , 1977					
21...	1050	7310	185	237	4680
373747094380200 - COX C 1 MILE S OF ARCADIA, KS (LAT 37 37 47 LONG 094 38 02)					
MAY , 1977					
17...	1620	18	950	113	5.5
374109094370400 - COX C 2 MILES N OF ARCADIA, KS (LAT 37 41 09 LONG 094 37 04)					
MAY , 1977					
17...	1440	61	1990	144	24

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
BIG NEMAHA RIVER BASIN							
06815274 - WALNUT C NR FAIRVIEW, KS (LAT 39 50 17 LONG 095 38 20)							
MAY , 1977							
19...	1500	25400	29	39	--	64	96
20...	0855	2320	67	76	81	88	95
SEP							
01...	1225	813	62	62	64	69	--
06815280 - WALNUT C NR HAMLIN, KS (LAT 39 53 58 LONG 095 35 35)							
MAY , 1977							
19...	1600	15200	42	50	--	76	93
20...	1015	3540	50	59	64	74	92
23...	1720	1520	68	74	77	83	93
AUG							
06...	0100	16400	41	50	59	66	90
06...	1420	2710	--	64	72	86	--
06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)							
MAY , 1977							
20...	1710	2500	--	67	71	80	98
20...	1750	2560	--	74	74	85	99
23...	1605	1010	63	68	73	82	94
AUG							
16...	1010	1060	67	71	80	88	94
WOLF RIVER BASIN							
06815578 - WOLF R AT HIAWATHA, KS (LAT 39 47 34 LONG 095 31 36)							
JUN , 1977							
21...	1740	7580	31	45	58	77	94
22...	1000	1140	78	87	95	96	--
AUG							
06...	0815	3730	51	55	66	71	93
06...	1310	2080	54	62	69	79	84
SEP							
01...	1110	60	--	--	--	--	--
02...	1550	2230	43	46	54	65	89
02...	1610	1970	44	49	56	70	92
02...	1740	1570	--	49	58	70	91
06815700 - BUTTERMILK C NR WILLIS, KS (LAT 39 45 16 LONG 095 27 02)							
MAY , 1977							
19...	1400	95	42	50	58	72	92
JUN							
21...	1750	10800	32	39	46	60	82
21...	2300	4430	50	57	66	80	96
22...	1100	920	--	--	--	--	--
24...	0930	7690	47	56	62	79	96
SEP							
02...	1245	1310	--	66	77	91	--
06815800 - WOLF R AT LEONA, KS (LAT 39 46 53 LONG 095 19 16)							
MAY , 1977							
20...	1440	2610	51	59	67	81	97
21...	1130	3800	46	52	62	76	94
AUG							
06...	1425	2940	61	63	72	85	--
SEP							
01...	1140	20	48	56	64	76	94
02...	1310	65	--	41	50	66	87
02...	1415	5010	--	46	55	70	98
12...	0400	5560	38	47	53	69	91

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

BIG NEMAHA RIVER BASIN

06815274 - WALNUT C NR FAIRVIEW, KS (LAT 39 50 17 LONG 095 38 20)

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
MAY , 1977						
19...	98	100	--	--	--	--
20...	99	100	--	--	--	--
SEP						
01...	91	93	95	99	100	--

06815288 - WALNUT C NR HAMLIN, KS (LAT 39 53 58 LONG 095 35 35)

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
MAY , 1977						
19...	100	--	--	--	--	--
20...	98	100	--	--	--	--
23...	98	100	--	--	--	--
AUG						
06...	98	100	--	--	--	--
06...	95	95	95	99	100	--

06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
MAY , 1977						
20...	100	--	--	--	--	--
20...	100	--	--	--	--	--
23...	98	--	--	--	--	--
AUG						
16...	98	100	--	--	--	--

WOLF RIVER BASIN

06815578 - WOLF R AT HIAWATHA, KS (LAT 39 47 34 LONG 095 31 36)

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
JUN , 1977						
21...	98	100	--	--	--	--
22...	98	100	--	--	--	--
AUG						
06...	98	100	--	--	--	--
06...	90	91	91	97	97	100
SEP						
01...	92	100	--	--	--	--
02...	97	97	98	99	100	--
02...	98	100	--	--	--	--
02...	96	100	--	--	--	--

06815700 - BUTTERMILK C NR WILLIS, KS (LAT 39 45 16 LONG 095 27 02)

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
MAY , 1977						
19...	98	100	--	--	--	--
JUN						
21...	92	100	--	--	--	--
21...	98	100	--	--	--	--
22...	99	100	--	--	--	--
24...	99	100	--	--	--	--
SEP						
02...	98	100	--	--	--	--

06815800 - WOLF R AT LEONA, KS (LAT 39 46 53 LONG 095 19 16)

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
MAY , 1977						
20...	99	100	--	--	--	--
21...	99	100	--	--	--	--
AUG						
06...	99	100	--	--	--	--
SEP						
01...	98	100	--	--	--	--
02...	97	98	99	100	--	--
02...	98	99	100	--	--	--
12...	98	100	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WOLF RIVER BASIN

06815000 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)

DATE	TIME	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
MAY , 1977							
19...	1700	23500	42	52	64	80	--
19...	1800	61700	--	26	42	58	82
20...	0930	7030	46	53	57	--	92
20...	1435	4260	45	53	61	73	90
20...	1730	3240	53	61	70	81	94
21...	0940	12200	34	40	47	64	90
21...	1830	3220	50	64	72	81	95
22...	0830	4340	70	80	90	94	--
29...	1600	11800	47	58	66	82	97
30...	1000	2130	71	82	--	95	99
JUN							
21...	0800	18800	32	40	48	64	87
22...	1330	4050	58	68	78	86	97
23...	1130	1020	78	85	89	93	--
AUG							
11...	1000	8190	37	46	54	67	88
SEP							
01...	1050	3960	40	51	61	--	74
01...	1300	3050	52	54	64	77	95
02...	1605	6760	37	45	53	--	68
12...	0500	6220	43	50	60	74	93

KANSAS RIVER BASIN

06861000 - SMOKY HILL R NR ARNOLD, KS (LAT 38 48 31 LONG 100 01 13)

DATE	TIME	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
AUG , 1977							
04...	1320	--	--	73	--	92	--
05...	1320	18300	46	--	--	--	--
06...	1430	5840	61	88	--	--	--

06864050 - SMOKY HILL R NR BUNKER HILL, KS (LAT 38 47 38 LONG 098 46 50)

DATE	TIME	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
MAY , 1977							
09...	1435	3040	50	64	--	83	--

06876700 - SALT C NR ADA, KS (LAT 39 08 30 LONG 097 50 10)

DATE	TIME	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
OCT , 1976							
04...	1005	7790	56	72	--	92	--

06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)

DATE	TIME	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
MAY , 1977							
20...	1900	905	82	87	88	92	97
JUN							
21...	1815	2730	71	84	90	95	98
22...	0200	11200	35	42	49	66	89
22...	0300	10700	27	38	52	73	95
24...	1835	--	411	--	--	--	--
AUG							
06...	1245	1300	80	96	96	--	98
16...	1320	981	65	74	78	89	--
SEP							
02...	1815	804	--	67	68	78	88
12...	0800	2700	42	45	52	68	89

06890094 - L GRASSHOPPER C NR EFFINGHAM, KS (LAT 39 35 00 LONG 095 25 26)

DATE	TIME	SUSPENDED SEDIMENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
MAY , 1977							
06...	1225	5580	77	92	98	100	--
19...	1500	3130	--	--	--	--	--
19...	1600	7350	47	52	61	77	97
19...	1700	4790	59	63	71	83	94
AUG							
16...	1240	1270	72	81	88	94	--
SEP							
12...	0200	2140	54	58	64	76	98

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
WOLF RIVER BASIN						
06815000 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)						
MAY , 1977						
19...	99	100	--	--	--	--
19...	99	100	--	--	--	--
20...	97	100	--	--	--	--
20...	97	100	--	--	--	--
20...	99	100	--	--	--	--
21...	98	100	--	--	--	--
21...	98	100	--	--	--	--
22...	100	--	--	--	--	--
29...	99	100	--	--	--	--
30...	100	--	--	--	--	--
JUN						
21...	98	100	--	--	--	--
22...	99	100	--	--	--	--
23...	99	--	--	--	--	--
AUG						
11...	98	100	--	--	--	--
SEP						
01...	98	100	--	--	--	--
01...	98	100	--	--	--	--
02...	98	99	100	--	--	--
12...	99	100	--	--	--	--
KANSAS RIVER BASIN						
06861000 - SMOKY HILL R NR ARNOLD, KS (LAT 38 48 31 LONG 100 01 13)						
AUG , 1977						
04...	96	100	--	--	--	--
05...	--	--	--	--	--	--
06...	100	--	--	--	--	--
06864050 - SMOKY HILL R NR BUNKER HILL, KS (LAT 38 47 30 LONG 098 46 50)						
MAY , 1977						
09...	95	96	96	100	--	--
06876700 - SALT C NR ADA, KS (LAT 39 08 30 LONG 097 50 10)						
OCT , 1976						
04...	100	--	--	--	--	--
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)						
MAY , 1977						
20...	98	100	--	--	--	--
JUN						
21...	99	100	--	--	--	--
22...	98	100	--	--	--	--
22...	99	100	--	--	--	--
24...	--	--	--	--	--	--
AUG						
06...	99	100	--	--	--	--
16...	90	100	--	--	--	--
SEP						
02...	97,	100	--	--	--	--
12...	94	100	--	--	--	--
06890094 - L GRASSHOPPER C NR EFFINGHAM, KS (LAT 39 35 00 LONG 095 25 26)						
MAY , 1977						
06...	--	--	--	--	--	--
19...	100	--	--	--	--	--
19...	98	100	--	--	--	--
19...	97	99	100	--	--	--
AUG						
16...	99	100	--	--	--	--
SEP						
12...	97	100	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

KANSAS RIVER BASIN

06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
MAY , 1977							
06...	1055	8900	61	78	89	97	--
19...	0600	12200	43	49	56	69	89
AUG							
06...	1150	3040	51	61	63	74	94
SEP							
01...	1515	1190	53	59	65	77	95
12...	0530	5350	38	46	53	67	93

06890100 - DELAWARE R NR MUSCOTAH, KS (LAT 39 31 17 LONG 095 31 57)

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
MAY , 1977							
23...	1035	71	83	88	92	95	--
SEP							
01...	1600	2180	52	63	72	82	95

06890460 - COAL C NR HALF MOUND, KS (LAT 39 23 27 LONG 095 28 45)

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
MAY , 1977							
17...	1800	8630	44	51	61	76	92
AUG							
16...	1145	1920	65	77	84	94	--
16...	1310	1650	68	77	85	93	99
SEP							
12...	0530	5600	25	30	37	49	70
12...	0600	6900	33	41	48	61	83

06891080 - KANSAS R AT LAWRENCE, KS (LAT 38 58 31 LONG 095 14 08)

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
JUN , 1977							
22...	1100	3180	--	53	--	--	--
22...	1105	3350	--	54	--	--	--
22...	1110	3300	--	47	--	--	--
22...	1115	3060	--	51	--	--	--
22...	1120	2810	--	55	--	--	--
22...	1125	3510	--	48	--	--	--
22...	1130	3030	--	50	--	--	--
22...	1200	3390	--	32	--	--	--
22...	1205	3570	--	47	--	--	--
22...	1210	3750	--	43	--	--	--
22...	1215	3530	--	44	--	--	--
22...	1220	3460	--	45	--	--	--
22...	1225	3210	--	50	--	--	--
22...	1300	2920	--	46	--	--	--
22...	1305	3920	--	48	--	--	--
22...	1310	4200	--	46	--	--	--
22...	1315	3960	--	18	--	--	--
22...	1320	3840	--	46	--	--	--
22...	1325	3800	--	47	--	--	--
22...	1330	3700	--	50	--	--	--
22...	1335	3710	--	49	--	--	--
24...	0930	1770	--	62	--	--	--
24...	0935	1730	--	54	--	--	--
24...	0940	1690	--	54	--	--	--
24...	0945	1690	--	58	--	--	--
24...	0950	1720	--	56	--	--	--
24...	0955	1700	--	54	--	--	--
24...	1000	2130	--	44	--	--	--
24...	1005	2090	--	44	--	--	--
24...	1010	1870	--	51	--	--	--
24...	1015	1800	--	54	--	--	--
24...	1020	1840	--	51	--	--	--
24...	1030	1570	--	46	--	--	--
24...	1035	1770	--	51	--	--	--
24...	1040	1690	--	55	--	--	--
24...	1045	1780	--	54	--	--	--
24...	1050	1670	--	54	--	--	--
24...	1100	1190	--	56	--	--	--
24...	1105	2480	--	56	--	--	--

ARKANSAS RIVER BASIN

07155590 - CIMARRON R NR ELKHART, KS (LAT 37 07 30 LONG 101 53 50)

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
MAY , 1977							
15...	1305	12100	50	65	--	84	--
15...	1640	28800	41	52	--	66	--

07156000 - NF CIMARRON R TR NR RICHFIELD, KS (LAT 37 18 36 LONG 101 46 10)

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM
MAY , 1977							
19...	1340	3510	76	84	--	87	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
KANSAS RIVER BASIN						
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)						
MAY , 1977						
06...	100	--	--	--	--	--
19...	97	100	--	--	--	--
AUG						
06...	96	100	--	--	--	--
SEP						
01...	99	100	--	--	--	--
12...	97	100	--	--	--	--
06890100 - DELAWARE R NR MUSCOTAH, KS (LAT 39 31 17 LONG 095 31 57)						
MAY , 1977						
23...	100	--	--	--	--	--
SEP						
01...	99	100	--	--	--	--
06890460 - COAL C NR HALF MOUND, KS (LAT 39 23 27 LONG 095 28 45)						
MAY , 1977						
17...	98	99	100	--	--	--
AUG						
16...	99	100	--	--	--	--
16...	100	--	--	--	--	--
SEP						
12...	80	84	90	99	100	--
12...	97	100	--	--	--	--
06891080 - KANSAS R AT LAWRENCE, KS (LAT 38 58 31 LONG 095 14 08)						
JUN , 1977						
22...	97	99	100	--	--	--
22...	96	100	--	--	--	--
22...	93	100	--	--	--	--
22...	98	100	--	--	--	--
22...	99	100	--	--	--	--
22...	98	100	--	--	--	--
22...	98	99	100	--	--	--
22...	94	96	99	100	--	--
22...	92	96	99	100	--	--
22...	90	93	97	100	--	--
22...	89	94	100	--	--	--
22...	94	98	100	--	--	--
22...	99	100	--	--	--	--
22...	91	95	99	100	--	--
22...	86	90	96	100	--	--
22...	88	92	98	100	--	--
22...	90	93	100	--	--	--
22...	90	94	99	100	--	--
22...	90	95	99	100	--	--
22...	91	95	99	100	--	--
22...	93	97	100	--	--	--
24...	97	99	100	--	--	--
24...	96	100	--	--	--	--
24...	98	99	100	--	--	--
24...	97	100	--	--	--	--
24...	98	100	--	--	--	--
24...	98	100	--	--	--	--
24...	81	86	94	100	--	--
24...	82	87	95	100	--	--
24...	93	97	99	100	--	--
24...	96	100	--	--	--	--
24...	96	100	--	--	--	--
24...	89	93	100	--	--	--
24...	93	97	100	--	--	--
24...	96	99	99	100	--	--
24...	90	97	99	99	100	--
24...	93	95	100	--	--	--
24...	95	98	99	100	--	--
24...	97	100	--	--	--	--
ARKANSAS RIVER BASIN						
07155590 - CIMARRON R NR ELKHART, KS (LAT 37 07 30 LONG 101 53 50)						
MAY , 1977						
15...	95	97	100	--	--	--
15...	80	85	94	98	100	--
07156000 - NF CIMARRON R TR NR RICHFIELD, KS (LAT 37 18 36 LONG 101 46 10)						
MAY , 1977						
19...	96	97	100	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SUS-PENDED SEDI-MENT (MG/L)	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM
BIG NEMAHA RIVER BASIN							
06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)							
AUG , 1977							
30...	1030	--	6	22	23	24	24
WOLF RIVER BASIN							
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)							
MAY , 1977							
26...	0910	--	--	10	11	13	45
KANSAS RIVER BASIN							
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)							
MAY , 1977							
26...	1350	--	13	32	34	39	52
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)							
MAY , 1977							
26...	1050	--	--	12	13	17	30
06891080 - KANSAS R AT LAWRENCE, KS (LAT 38 58 31 LONG 095 14 08)							
JUN , 1977							
22...	1100	3180	--	0	--	--	--
22...	1200	3390	--	0	--	--	--
22...	1300	2920	--	0	30	32	85
24...	0955	1700	--	0	--	--	--
24...	1030	1570	--	--	0	20	85
24...	1105	2480	--	--	0	3	14

ANALYSES OF MISCELLANEOUS STATIONS

DATE	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
BIG NEMAHA RIVER BASIN						
06815300 - WALNUT C AT RESERVE, KS (LAT 39 58 19 LONG 095 33 10)						
AUG , 1977						
30...	24	37	62	85	100	--
WOLF RIVER BASIN						
06815880 - WOLF R NR SPARKS, KS (LAT 39 49 18 LONG 095 11 23)						
MAY , 1977						
26...	75	82	87	92	96	100
KANSAS RIVER BASIN						
06890000 - L DELAWARE R NR HORTON, KS (LAT 39 41 47 LONG 095 33 49)						
MAY , 1977						
26...	58	73	88	94	100	--
06890096 - L GRASSHOPPER C AT MUSCOTAH, KS (LAT 39 32 54 LONG 095 30 55)						
MAY , 1977						
26...	53	74	84	90	96	100
06891080 - KANSAS R AT LAWRENCE, KS (LAT 38 58 31 LONG 095 14 08)						
JUN , 1977						
22...	--	--	--	--	--	100
22...	--	--	--	--	--	100
22...	98	98	99	100	--	--
24...	--	--	--	--	--	100
24...	100	--	--	--	--	--
24...	44	74	96	99	100	--

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
BIG NEMAHA RIVER BASIN							
06814600 TURKEY C NR SENECA, KS . . . . (LAT 39 56 52 LONG 096 06 30)							
OCT., 1976				APR.,			
6...	1100	7.7	10.5	6...	1420	13	14.0
NOV.,				MAY			
9...	0905	3.0	5.0	10...	1710	2.6	20.5
DEC.,				JUNE			
7...	0930	3.0	0.5	29...	1710	0.42	20.0
JAN., 1977				AUG.,			
11...	1000	2.7	0.5	4...	1030	0.03	24.0
FEB.,				SEP.,			
8...	0920	3.6	0.5	2...	1455	1640	22.0
MAR.,				13...	1240	1080	19.0
15...	0835	11	7.0				
KANSAS RIVER BASIN							
06844900 SF SAPPA C NR ACHILLES, KS . . . . (LAT 39 43 37 LONG 100 43 10)							
MAY , 1977				JULY			
22...	1105	431	18.0	7...	1540	0.06	32.0
22...	1630	235	18.0	AUG.,			
23...	1720	67	17.5	10...	0920	0.01	27.0
JUNE				SEP.,			
8...	1720	0.57	30.5	7...	1405	7.7	29.5
06846000 BEAVER C AT CEDAR BLUFFS, KS . . . . (LAT 39 59 06 LONG 100 33 35)							
MAY , 1977							
23...	1240	18	19.0				
06847900 PRAIRIE DOG C AB NORTON RE, KS . . . . (LAT 39 46 13 LONG 100 05 00)							
APR., 1977				SEP.,			
27...	1155	1.2	5.0	1...	1110	30	19.0
JUNE							
8...	1300	6.0	22.0				
06848000 PRAIRIE DOG C AT NORTON, KS . . . . (LAT 39 48 36 LONG 099 55 10)							
NOV., 1976				SEP.,			
9...	1140	0.02	6.0	1...	1710	0.17	22.0
JULY, 1977							
19...	0940	77	26.5				
06848500 PRAIRIE DOG C NR WOODRUFF, KS . . . . (LAT 39 59 09 LONG 099 28 30)							
OCT., 1976				MAR.,			
13...	1400	0.18	17.0	16...	0930	3.1	6.0
NOV.,				APR.,			
18...	0920	0.56	0.0	13...	1400	1.7	15.5
DEC.,				JUNE			
20...	0945	0.07	0.0	14...	0900	1.8	20.5
JAN., 1977				JULY			
19...	1020	0.29	0.0	20...	1100	2.1	24.0
FEB.,				SEP.,			
11...	0955	0.01	0.0	10...	1105	0.07	17.5
06853500 REPUBLICAN R NR HARDY, NE . . . . (LAT 40 00 01 LONG 097 56 55)							
OCT., 1976				MAR.,			
18...	1300	50	10.0	22...	1345	113	12.0
NOV.,				APR.,			
17...	1400	81	7.0	20...	1330	106	16.0
JAN., 1977				JULY			
20...	1350	91	0.0	27...	1150	257	25.0
FEB.,				SEP.,			
24...	1310	182	7.0	10...	1105	1610	25.0
06855800 WHITE ROCK C NR BURR OAK, KS . . . . (LAT 39 53 00 LONG 098 18 05)							
OCT., 1976				MAR.,			
19...	0840	0.12	6.0	22...	1520	2.0	9.0
NOV.,				APR.,			
17...	0915	0.04	1.0	20...	1500	5.5	19.0
JAN., 1977				JUNE			
20...	0945	1.1	0.0	8...	1530	0.03	20.0
FEB.,				SEP.,			
24...	0930	4.0	0.5	10...	1305	0.05	25.0
06856000 WHITE ROCK C AT LOVEWELL, KS . . . . (LAT 39 53 18 LONG 098 01 55)							
NOV., 1976							
17...	1100	0.07	2.0				
[illegible] BUFFALO C NR JAMESTOWN, KS . . . . (LAT [illegible] LONG [illegible])							
OCT., 1976				JUNE			
19...	1050	0.80	7.0	8...	1500	22	20.0
NOV.,				14...	[illegible]	[illegible]	[illegible]
18...	1015	0.10	6.0	15...	[illegible]	[illegible]	[illegible]
DEC.,				16...	1100	12	24.0
21...	1030	0.07	0.0	JULY			
JAN., 1977				20...	0900	11	25.0
20...	1110	0.20	0.0	AUG.,			
FEB.,				10...	1430	[illegible]	21.0
18...	1055	1.6	0.0	SEP.,			
MAR.,				10...	1520	[illegible]	20.0
16...	1000	1.8	8.0				
APR.,							
20...	1015	1.2	18.0				

KANSAS RIVER BASIN

06855900 WOLF C NR CONCORDIA, KS . . . . (LAT 39 32 35 LONG 097 43 20)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
FEB., 1977				AUG.			
11...	1030	0.03	0.5	16...	1120	1380	21.5
MAR.				SEP.			
10...	1530	0.12	14.0	16...	1420	0.94	25.5
APR.							
19...	1000	0.15	19.0				
JUNE							
16...	1205	0.49	26.0				
17...	1158	36	19.0				

06856000 REPUBLICAN R AT CONCORDIA, KS . . . . (LAT 39 35 25 LONG 097 39 32)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
5...	1355	71	17.0	25...	1330	250	26.0
NOV.				JUNE			
12...	1600	63	2.0	14...	1145	2920	23.0
JAN., 1977				JULY			
12...	1330	87	0.0	8...	1230	218	27.0
FEB.				AUG.			
11...	1225	104	0.0	17...	1340	3800	22.0
MAR.				SEP.			
10...	1250	190	12.0	19...	1435	560	21.0
APR.							
19...	1200	107	20.0				

06856600 REPUBLICAN R AT CLAY CENTER, KS . . . . (LAT 39 21 20 LONG 097 07 34)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
8...	1640	95	14.0	13...	1910	132	18.0
NOV.				JUNE			
11...	1000	72	6.0	7...	1415	242	25.0
DEC.				15...	1430	2850	24.0
15...	1505	92	1.0	JULY			
JAN., 1977				25...	1150	380	26.5
20...	1110	56	0.0	AUG.			
FEB.				18...	1000	9130	23.0
17...	1115	259	0.5				
MAR.							
17...	1110	231	12.5				

06857100 REPUBLICAN R BL MILFORD DAM, KS . . . . (LAT 39 04 15 LONG 096 53 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				JUNE			
29...	1120	180	9.5	8...	1200	49	22.0
JAN., 1977				30...	1325	4010	22.0
19...	1400	163	2.0	JULY			
20...	1030	154	2.5	21...	1415	1010	25.0
FEB.				AUG.			
1...	1400	84	2.5	24...	1150	5060	25.0
MAR.							
9...	1410	78	10.0				
APR.							
18...	1445	39	16.0				
19...	1110	58	17.0				

[illegible] LADDER C BL CHALK C NR SCOTT CITY, KS . . . (LAT 38 47 [illegible] LONG 100 52 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
8...	1450	1.7	14.0	18...	1050	114	17.0
NOV.				JUNE			
11...	1130	1.0	0.5	9...	1040	[illegible]	23.0
DEC.				28...	[illegible]	1.8	21.0
9...	1110	2.2	0.5	JULY			
JAN., 1977				6...	1100	1.0	25.0
21...	1055	2.4	1.0	29...	1100	160	24.5
FEB.				AUG.			
18...	1125	2.4	4.5	9...	1040	1.5	30.0
MAR.				26...	1040	1.4	20.0
21...	1110	1.3	6.5	SEP.			
APR.				7...	1110	0.24	21.0
20...	1405	2.5	21.0				

[illegible] SMOKY HILL R AT ELKADER, KS . . . . (LAT 38 47 [illegible] LONG 100 51 [illegible])

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
8...	[illegible]	[illegible]	[illegible]	18...	[illegible]	[illegible]	[illegible]
NOV.				JUNE			
11...	[illegible]	[illegible]	[illegible]	9...	[illegible]	[illegible]	[illegible]
DEC.				JULY			
9...	[illegible]	[illegible]	[illegible]	6...	[illegible]	[illegible]	[illegible]
JAN., 1977				29...	[illegible]	[illegible]	[illegible]
21...	[illegible]	[illegible]	[illegible]	AUG.			
FEB.				9...	[illegible]	[illegible]	[illegible]
18...	[illegible]	[illegible]	[illegible]	SEP.			
MAR.				7...	[illegible]	[illegible]	[illegible]
21...	[illegible]	[illegible]	[illegible]				
APR.							
20...	[illegible]	[illegible]	[illegible]				

KANSAS RIVER BASIN

06861000 SMOKY HILL R NR ARNOLD, KS . . . . (LAT 38 48 31 LONG 100 01 13)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				JUNE			
4...	1310	1.9	16.0	7...	1340	2.5	29.5
NOV.				JULY			
8...	1425	0.77	14.5	20...	0935	0.03	23.5
DEC.				AUG.			
7...	1340	1.1	5.0	5...	1240	2360	22.0
FEB., 1977				6...	1415	310	30.0
7...	1605	3.9	3.0	SEP.			
APR.				13...	1505	1.5	24.0
22...	1545	58	14.0				

06862000 SMOKY HILL R AT CEDAR BLUFF DAM, KS . . . . (LAT 38 47 30 LONG 099 43 20)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				JULY, 1977			
27...	1550	0.28	5.0	19...	1715	26	28.5
NOV.				SEP.			
23...	1120	0.07	4.0	8...	1600	0.38	27.0

06862700 SMOKY HILL R NR SCHOENCHEN, KS . . . . (LAT 38 43 30 LONG 099 23 30)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
12...	1700	18	19.0	23...	0945	17	8.0
NOV.				APR.			
23...	1405	29	6.5	22...	0825	29	10.5
DEC.				JULY			
22...	1610	21	3.0	19...	0910	14	26.5
JAN., 1977				AUG.			
25...	1110	26	0.0	23...	1210	31	26.5
FEB.							
17...	0945	28	3.0				

06863500 BIG C NR HAYS, KS . . . . (LAT 38 48 45 LONG 099 15 14)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
12...	1410	7.6	16.0	22...	1600	6.6	10.5
NOV.				APR.			
23...	1630	7.0	3.0	22...	1035	22	12.0
DEC.				JULY			
22...	1345	7.5	0.0	19...	1150	1.2	25.5
JAN., 1977				AUG.			
25...	1320	6.6	0.0	24...	0850	11	22.5
FEB.							
17...	1205	10	3.5				

06864000 SMOKY HILL R NR BUNKER HILL, KS . . . . (LAT 38 47 30 LONG 098 44 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
28...	1515	31	9.0	22...	1300	29	13.0
NOV.				APR.			
24...	1040	32	3.0	21...	1310	41	12.0
DEC.				JULY			
22...	1150	36	0.0	18...	1315	9.5	30.5
JAN., 1977				AUG.			
27...	1200	36	0.5	24...	1140	100	23.5
FEB.							
22...	1310	46	0.0				

06864500 SMOKY HILL R AT ELLSWORTH, KS . . . . (LAT 38 43 30 LONG 098 14 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
8...	1430	48	16.0	6...	1305	56	11.0
NOV.				MAY			
30...	1150	23	0.0	11...	1110	213	17.0
DEC.				JUNE			
27...	1200	55	1.5	1...	1200	1010	23.0
JAN., 1977				6...	1420	127	27.0
28...	1130	50	0.5	JULY			
FEB.				11...	1130	67	27.0
15...	1115	85	0.5	AUG.			
MAR.				25...	1150	890	24.0
15...	1045	56	15.5				

[illegible] SMOKY HILL R NR LANGLEY, KS . . . . (LAT [illegible] LONG [illegible])

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV.				APR.			
[illegible]	[illegible]	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC.				MAY			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JAN., 1977				JUNE			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FEB.				AUG.			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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06866500 SMOKY HILL R NR MENTOR, KS . . . . (LAT 38 47 54 LONG 097 34 28)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
8...	1305	57	14.0	8...	1335	77	22.0
DEC.				MAY			
1...	1550	36	0.5	24...	1210	103	22.5
JAN., 1977				JULY			
9...	1110	38	0.0	5...	1055	229	25.0
FEB.				AUG.			
1...	1305	39	0.5	15...	1200	473	26.5
MAR.				SEP.			
2...	1040	41	5.5	2...	1350	4890	22.5

06867000 SALINE R NR RUSSELL, KS . . . . (LAT 38 58 00 LONG 098 51 20)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
20...	1200	9.5	7.0	23...	1410	44	25.5
NOV.				JUNE			
22...	1615	11	5.0	27...	1105	9.1	28.5
DEC.				JULY			
22...	1130	7.7	0.0	22...	1040	2.3	28.0
JAN., 1977				AUG.			
25...	1050	4.6	0.0	24...	1430	7.6	23.5
FEB.				26...	1650	2170	26.0
17...	1550	27	10.0	SEP.			
MAR.				22...	0940	7.9	18.0
23...	1400	12	17.0				
APR.							
22...	1425	58	18.5				

06868200 SALINE R AT WILSON DAM, KS . . . . (LAT 38 58 35 LONG 098 29 28)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
8...	1140	9.8	16.5	17...	1405	9.9	12.5
NOV.				APR.			
29...	1320	6.6	9.0	27...	1450	10	19.5
DEC.				JULY			
23...	1520	6.7	5.0	26...	1200	19	26.0
JAN., 1977				AUG.			
20...	1520	5.2	6.0	5...	1130	18	25.5
FEB.				SEP.			
8...	1610	5.2	8.0	15...	1405	19	25.0

06869500 SALINE R AT TESCOTT, KS . . . . (LAT 39 00 15 LONG 097 52 26)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
5...	0950	1210	14.5	26...	1320	33	17.0
29...	1135	82	8.0	MAY			
NOV.				31...	1710	1870	21.0
15...	1115	21	1.0	JUNE			
JAN., 1977				8...	1035	48	24.0
6...	1130	19	0.0	JULY			
FEB.				20...	1130	16	26.0
8...	1150	26	0.0	SEP.			
MAR.				20...	1150	43	20.0
7...	1345	24	7.5				

06870200 SMOKY HILL R AT NEW CAMBRIA, KS . . . . (LAT 38 51 13 LONG 097 27 52)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
7...	1400	1170	13.5	24...	1720	282	24.0
DEC.				JULY			
1...	1000	75	0.5	5...	1400	288	27.5
JAN., 1977				7...	1150	232	28.0
5...	1440	71	0.0	AUG.			
FEB.				21...	1000	3130	23.0
10...	1105	108	4.0	SEP.			
MAR.				2...	1015	6040	24.0
3...	1105	110	6.0	16...	1130	1600	25.0
APR.							
13...	1040	88	17.5				

[illegible] GYPSUM C NR GYPSUM, KS . . . . (LAT 38 39 11 LONG 097 25 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
JUNE, 1977			
[illegible]	1000	[illegible]	22.5

[illegible] NF SOLOMON R AT GLADE, KS . . . . (LAT 39 40 40 LONG 099 18 30)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
1...	1400	0.10	[illegible]	10...	1110	40	21.0
MAR., 1977				JUNE			
17...	0820	8.0	10.0	13...	1015	10	27.0
APR.				SEP.			
16...	1710	13	20.0	10...	1625	0.2	23.5

MISCELLANEOUS WATER TEMPERATURES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

KANSAS RIVER BASIN

06871500 BOW C NR STOCKTON, KS . . . . (LAT 39 33 46 LONG 099 17 04)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
1...	1555	0.01	21.5	17...	1330	4.4	13.5
13...	1040	0.02	10.5	APR.			
NOV.				14...	1245	5.3	21.0
19...	1400	1.0	5.5	JUNE			
DEC.				2...	1055	24	24.0
29...	1715	3.4	0.0	29...	0850	2.6	10.0
JAN., 1977				SEP.			
19...	1430	0.61	0.0	15...	1350	1.4	19.5
FEB.							
10...	1400	3.0	0.0				

06871800 NF SOLOMON R AT KIRWIN, KS . . . . (LAT 39 36 36 LONG 099 06 55)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976				APR.			
18...	1445	0.06	6.5	14...	0930	0.06	16.0
MAR., 1977							
10...	0040	0.04	4.5				

06871900 DEER C NR PHILLIPSBURG, KS . . . . (LAT 39 46 50 LONG 099 25 20)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976				APR.			
18...	1100	0.88	2.0	13...	0950	1.7	13.0
DEC.				JUNE			
30...	1240	0.34	0.0	3...	1140	1.0	21.0
FEB., 1977				SEP.			
11...	1300	0.70	0.0	16...	0935	1.4	10.0
MAR.							
15...	1010	1.1	10.5				

06872500 NF SOLOMON R AT PORTIS, KS . . . . (LAT 39 33 15 LONG 098 41 31)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
14...	1430	20	16.0	19...	1300	32	17.5
NOV.				JUNE			
18...	1700	22	8.0	13...	1405	33	22.5
JAN., 1977				JULY			
17...	1720	17	0.0	18...	1650	20	31.5
FEB.				SEP.			
15...	1540	26	4.0	16...	0920	20	17.0
MAR.							
18...	1140	25	11.0				

06873000 SF SOLOMON R AB WEBSTER RE, KS . . . . (LAT 39 22 26 LONG 099 34 54)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
7...	1725	0.25	16.0	17...	1010	6.7	6.5
NOV.				APR.			
19...	0905	0.38	2.0	14...	1530	9.1	25.0
DEC.				MAY			
29...	1535	1.2	2.0	17...	1720	105	25.0
JAN., 1977				JUNE			
19...	1645	0.45	2.0	8...	1430	43	27.0
FEB.				SEP.			
10...	1030	2.5	0.5	19...	1015	3.6	17.0

06873200 SF SOLOMON R BL WEBSTER RE, KS . . . . (LAT 39 24 34 LONG 099 26 53)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
JUNE, 1977				JULY			
29...	1130	195	26.0	8...	1600	190	26.0

06873700 KILL C NR BLOOMINGTON, KS . . . . (LAT 39 22 45 LONG 098 51 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
FEB., 1977							
9...	1540	0.01	3.0				

06874000 SF SOLOMON R AT OSBORNE, KS . . . . (LAT 39 25 43 LONG 098 41 40)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
14...	1600	11	10.0	19...	1115	16	17.5
DEC.				JUNE			
29...	1620	15	3.0	8...	0950	86	21.0
JAN., 1977				JULY			
19...	1240	0.0	0.0	19...	0840	1.0	26.0
FEB.				SEP.			
9...	1340	15	1.0	16...	1515	13	23.0
MAR.							
10...	1440	12	10.0				

06875900 SOLOMON R NR GLEN ELDER, KS . . . . (LAT 39 30 27 LONG 098 19 53)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976				JUNE			
21...	1240	15	6.0	28...	1100	6.0	25.0
MAR., 1977							
15...	1240	27	7.0				

KANSAS RIVER BASIN

06876700 SALT C NR ADA, KS . . . . (LAT 39 08 30 LONG 097 50 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
4...	0940	985	15.5	31...	1300	945	20.0
NOV.				JUNE			
15...	1450	0.1	2.0	1...	1550	342	21.0
DEC.				8...	1305	18	22.0
21...	1640	11	0.0	JULY			
JAN., 1977				28...	1325	1.3	26.0
17...	1120	5.8	0.0	AUG.			
FEB.				25...	1315	331	21.5
18...	1345	16	1.5	SEP.			
MAR.				20...	1445	5.6	22.0
7...	1100	12	3.5				
APR.							
26...	1030	15	13.5				

06876900 SOLOMON R AT NILES, KS . . . . (LAT 38 58 08 LONG 097 28 34)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
21...	1350	66	26.5	25...	1115	103	16.0
DEC.				MAY			
9...	1525	78	1.5	31...	1120	3480	20.0
JAN., 1977				JUNE			
13...	1445	66	0.0	15...	1030	843	24.5
FEB.				JULY			
10...	1320	95	0.5	14...	1105	50	26.0
MAR.				SEP.			
8...	1400	81	9.0	13...	1100	141	23.0

06877600 SMOKY HILL R AT ENTERPRISE, KS . . . . (LAT 38 54 24 LONG 097 07 12)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
12...	1140	426	16.0	9...	1130	372	20.0
NOV.				JUNE			
10...	1210	194	8.5	1...	1410	8030	21.0
JAN., 1977				JULY			
17...	1210	168	0.0	12...	1130	655	28.0
FEB.				AUG.			
7...	1125	240	1.0	10...	1315	1540	28.5
MAR.				SEP.			
7...	1200	271	6.0	6...	1200	2070	25.0
APR.							
11...	1100	258	16.0				

06878000 CHAPMAN C NR CHAPMAN, KS . . . . (LAT 39 10 00 LONG 097 13 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
6...	1120	124	12.5	20...	1245	43	15.0
DEC.				JUNE			
9...	1145	14	0.0	1...	1040	737	22.0
JAN., 1977				10...	1230	9240	27.0
13...	1120	18	0.0	JULY			
FEB.				15...	1350	26	28.0
10...	1030	21	1.0	SEP.			
MAR.				12...	1140	78	25.0
21...	1045	19	7.0				

06879100 KANSAS R AT FORT RILEY, KS . . . . (LAT 39 03 09 LONG 096 46 33)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
JAN., 1977				JUNE			
20...	1245	376	0.0	2...	1135	10600	22.0
FEB.				SEP.			
10...	1300	389	2.0	23...	1115	2760	22.0
MAR.				OCT., 1976			
9...	1055	379	10.5	1...	1340	1.0	16.5
APR.							
26...	1410	910	20.0				

06884200 MILL C AT WASHINGTON, KS . . . . (LAT 39 48 50 LONG 097 02 20)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
DEC., 1976				APR.			
3...	1540	[illegible]	0.5	21...	0940	13	14.0
8...	1500	4.5	<0.1	JUNE			
JAN., 1977				7...	0910	21	23.5
20...	1330	7.0	0.0	JULY			
FEB.				27...	1020	0.02	24.0
23...	1220	10	2.0	SEP.			
MAR.				13...	1525	[illegible]	25.5
23...	0930	5.5	6.0				

06884400 L BLUE R NR BARNES, KS . . . . (LAT [illegible] LONG [illegible])

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NOV.				MAY			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEC.				JUNE			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
JAN., 1977				JULY			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FEB.				AUG.			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MAR.				SEP.			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
KANSAS RIVER BASIN							
06885500 BLACK VERMILLION R NR FRANKFORT, KS . . . . (LAT 39 41 03 LONG 096 26 15)							
OCT., 1976				APR.			
19...	1540	4.1	7.0	21...	1315	14	14.0
DEC.				MAY			
15...	1120	0.5	1.0	20...	1320	1020	17.5
JAN., 1977				JULY			
21...	1050	9.0	0.0	26...	1340	0.29	26.0
FEB.				SEP.			
22...	1515	20	2.0	3...	1420	3660	23.5
MAR.				13...	1045	16300	20.0
23...	1310	12	6.0				
06887000 BIG BLUE R NR MANHATTAN, KS . . . . (LAT 39 14 14 LONG 096 34 16)							
OCT., 1976				APR.			
14...	0920	283	13.5	11...	1335	297	16.0
NOV.				JUNE			
23...	1405	374	6.0	8...	1335	2540	22.5
JAN., 1977				AUG.			
13...	1300	339	1.0	19...	1430	4800	25.0
FEB.				SEP.			
7...	1130	343	2.5	16...	1435	10200	24.5
MAR.							
8...	1235	319	7.0				
06887500 KANSAS R AT WAMEGO, KS . . . . (LAT 39 11 52 LONG 096 18 16)							
OCT., 1976				APR.			
27...	1125	867	6.0	25...	1200	946	16.0
DEC.				JUNE			
20...	1510	750	0.5	10...	1220	2620	27.0
JAN., 1977				JULY			
21...	1315	767	1.0	1...	1315	8300	28.0
FEB.				AUG.			
15...	1230	875	2.0	29...	1150	10800	26.0
MAR.							
10...	1300	601	12.0				
06888500 MILL C NR PAXICO, KS . . . . (LAT 39 03 44 LONG 096 10 52)							
OCT., 1976				APR.			
4...	1445	6.6	10.5	4...	1400	10	7.5
NOV.				MAY			
10...	1300	0.3	6.0	9...	1145	19	22.5
DEC.				JUNE			
8...	1013	8.5	1.0	18...	1722	13000	24.0
JAN., 1977				23...	1430	1040	22.0
11...	1440	6.6	0.5	AUG.			
FEB.				1...	1235	37	27.5
7...	1015	9.5	0.5	SEP.			
MAR.				2...	1734	299	22.0
7...	1400	9.6	7.0	19...	1615	100	20.0
06889000 KANSAS R AT TOPEKA, KS . . . . (LAT 39 04 00 LONG [illegible] 38 [illegible])							
OCT., 1976				MAY			
6...	1000	854	10.5	6...	1430	850	22.0
19...	1200	837	6.5	31...	1420	15100	18.0
NOV.				JUNE			
11...	1000	897	5.0	22...	1310	33800	28.0
22...	1050	867	1.5	JULY			
JAN., 1977				19...	1140	3890	27.0
19...	1120	612	0.0	AUG.			
FEB.				8...	1040	2150	26.5
3...	1000	690	0.0	23...	0930	11900	23.5
MAR.				SEP.			
9...	0930	670	8.0	16...	1305	13000	22.5
21...	1130	770	8.0				
APR.							
1...	1440	903	12.0				
18...	1000	700	19.0				
[illegible] SOLDIER C NR [illegible], KS . . . . (LAT 39 [illegible] LONG [illegible])							
MAR., 1977				JUNE			
9...	1040	0.02	16.0	30...	1000	0.00	25.0
APR.				SEP.			
8...	1100	0.00	10.0	12...	1020	0.0	21.0
MAY							
10...	1410	[illegible]	20.0				
19...	0810	320	17.0				
19...	1000	[illegible]	17.0				
20...	1000	6.0	16.0				

MISCELLANEOUS WATER TEMPERATURES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

KANSAS RIVER BASIN

06889120 SOLDIER C NR BANCROFT, KS . . . . (LAT 39 35 42 LONG 095 58 17)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976				MAY			
9...	1115	0.04	6.0	10...	1335	0.09	22.0
DEC.				19...	1700	933	17.5
7...	1215	0.10	0.5	19...	1950	1530	17.5
JAN., 1977				20...	1200	19	17.5
11...	1200	0.01	0.5	JUNE			
FEB.				24...	1740	5.9	25.5
8...	1100	0.	0.5	SEP.			
MAR.				14...	1035	12	22.5
9...	1320	0.25	14.5				
APR.							
6...	1045	0.57	11.0				

06889140 SOLDIER C NR SOLDIER, KS . . . . (LAT 39 33 57 LONG 095 57 45)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
5...	1510	0.18	16.0	6...	0920	1.1	6.5
NOV.				MAY			
9...	1200	0.19	6.0	10...	1220	0.45	20.5
DEC.				19...	2010	1940	17.5
7...	1350	0.30	1.0	20...	1050	39	17.0
JAN., 1977				JUNE			
10...	1650	0.23	0.5	24...	1345	20	24.0
24...	1345	0.28	0.5	AUG.			
FEB.				3...	1350	0.05	29.0
8...	1215	0.23	0.5	SEP.			
MAR.				14...	1450	14	20.0
9...	1035	0.76	9.0				

06889160 SOLDIER C NR CIRCLEVILLE, KS . . . . (LAT 39 27 47 LONG 095 57 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
6...	0825	0.32	11.0	5...	1540	5.1	9.0
NOV.				MAY			
9...	1442	0.61	7.0	10...	1100	1.4	18.0
DEC.				20...	1430	106	18.5
7...	1605	0.73	1.0	JUNE			
JAN., 1977				24...	1040	14	23.5
10...	1410	0.19	0.5	AUG.			
24...	1430	0.56	0.5	3...	1055	0.43	23.5
FEB.				SEP.			
7...	1655	0.52	0.5	14...	1735	54	20.0
MAR.							
9...	0820	1.0	7.5				

06889180 SOLDIER C NR ST CLERE, KS . . . . (LAT 39 22 33 LONG 095 55 05)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
5...	1405	0.74	15.5	5...	1320	7.2	8.5
NOV.				MAY			
10...	0935	1.5	5.5	12...	1350	2.8	23.0
DEC.				JUNE			
8...	1030	1.2	0.5	24...	0855	29	23.0
JAN., 1977				AUG.			
10...	[illegible]	0.68	0.5	3...	0910	1.1	23.0
FEB.				SEP.			
7...	1510	1.0	0.0	15...	1030	109	17.0
MAR.							
8...	1545	2.9	9.0				

06889200 SOLDIER C NR DELIA, KS . . . . (LAT 39 12 08 LONG 095 52 25)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
5...	1150	0.32	16.5	5...	1045	4.0	8.0
NOV.				MAY			
10...	1130	1.6	6.0	12...	1140	4.5	18.5
DEC.				20...	1640	2700	18.0
8...	1240	1.7	0.5	JUNE			
JAN., 1977				23...	1140	101	21.5
10...	1020	1.4	0.5	AUG.			
24...	1100	1.2	0.5	2...	1500	2.2	28.5
FEB.				SEP.			
7...	1325	1.5	0.0	14...	1210	661	20.0
MAR.							
8...	1320	4.2	8.0				

06889500 SOLDIER C NR TOPEKA, KS . . . . (LAT 39 06 00 LONG 095 43 27)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
5...	1005	3.1	13.5	6...	1040	6.6	10.5
NOV.				MAY			
11...	1100	2.0	6.0	12...	1020	12	20.0
DEC.				20...	1030	[illegible]	18.0
13...	1005	5.0	0.0	21...	1025	[illegible]	18.0
JAN., 1977				JUNE			
10...	1050	2.1	0.5	17...	1130	19	25.0
20...	0900	2.0	0.5	AUG.			
FEB.				3...	1030	9.2	28.0
8...	1155	1.0	0.5	SEP.			
MAR.				15...	1000	[illegible]	20.0
8...	1000	8.1	11.0				

KANSAS RIVER BASIN

06890100 DELAWARE R NR MUSCOTAH, KS . . . . (LAT 39 31 17 LONG 095 31 57)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
6...	1400	2.6	14.0
NOV.			
8...	1350	2.8	8.5
DEC.			
6...	1345	4.5	0.5
JAN., 1977			
5...	1100	3.7	0.0
FEB.			
9...	1040	2.2	0.5
MAR.			
10...	1040	12	10.5
APR.			
7...	1110	30	14.5
MAY			
11...	1120	5.5	20.5
23...	1050	194	21.0
JUNE			
30...	1620	16	30.0
JULY			
11...	1640	538	23.0
AUG.			
4...	1440	2.5	31.5
SEP.			
1...	1650	5550	21.5
2...	1130	455	22.0
14...	1100	2490	19.5

06890900 DELAWARE R BL PERRY DAM, KS . . . . (LAT 39 06 51 LONG 095 25 33)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
20...	1505	32	14.5
APR., 1977			
14...	1455	41	14.0
JULY			
7...	1615	1270	25.0
AUG.			
23...	1200	423	24.0

06891000 KANSAS R AT LECOMPTON, KS . . . . (LAT 39 03 07 LONG 095 23 15)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
4...	1400	1030	20.5
NOV.			
8...	1340	1030	8.5
DEC.			
14...	1010	937	2.5
JAN., 1977			
12...	1440	731	0.5
FEB.			
11...	0940	910	4.0
MAR.			
16...	1430	898	17.0
APR.			
14...	1010	891	18.5
MAY			
23...	1355	10100	19.0
AUG.			
17...	1025	3300	25.0
SEP.			
26...	1015	11900	20.5

06891483 WAKARUSA R BL CLINTON DAM, KS . . . . (LAT 38 55 14 LONG 095 17 17)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
7...	0915	0.85	12.0
NOV.			
8...	1530	0.47	12.0
DEC.			
13...	1325	0.91	3.0
JAN., 1977			
12...	1220	0.38	0.5
FEB.			
2...	0920	0.94	0.5
9...	0840	2.2	0.5
MAR.			
7...	1415	4.1	7.0
APR.			
15...	0950	1.3	19.0
MAY			
5...	0950	80	19.5
JUNE			
1...	1150	326	23.0
20...	1625	2430	20.5
24...	0940	3730	22.5
JULY			
28...	1055	18	25.5
AUG.			
5...	1010	69	25.0
16...	1540	24	27.0
SEP.			
16...	1330	990	26.5
26...	1530	95	20.0

06892000 STRANGER C NR TONGANOXIE, KS . . . . (LAT 39 06 59 LONG 095 08 30)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
7...	0950	0.15	11.0
NOV.			
8...	0900	2.5	5.0
18...	1045	2.9	4.5
DEC.			
6...	0950	3.2	1.0
JAN., 1977			
5...	1350	2.8	0.5
FEB.			
9...	1345	2.3	0.5
MAR.			
10...	1440	9.7	13.0
APR.			
7...	1505	11	16.0
MAY			
11...	1520	27	23.0
24...	1700	684	19.0
26...	1010	610	19.0
JUNE			
28...	1500	32	27.0
JULY			
29...	1320	0.49	32.0
AUG.			
5...	1030	3240	23.0
5...	1410	2750	23.0
SEP.			
2...	1130	1990	23.0
13...	1050	13800	19.0

06892350 KANSAS R AT DESOTO, KS . . . . (LAT 38 59 00 LONG 094 57 52)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
7...	1325	1140	14.5
28...	1100	1190	7.0
NOV.			
9...	1425	1000	6.0
19...	1430	1230	10.5
DEC.			
16...	1430	676	1.5
JAN., 1977			
13...	1430	750	0.5
FEB.			
8...	1025	690	0.5
18...	1005	1480	3.0
MAR.			
8...	1420	1120	8.5
17...	1005	1630	11.5
30...	1440	1170	16.0
APR.			
21...	1125	1000	18.0
MAY			
6...	1120	1470	23.0
26...	1030	10600	20.5
JUNE			
9...	1100	17500	23.0
14...	1015	2720	26.5
JULY			
6...	1100	10000	26.0
29...	1015	2690	25.5
AUG.			
19...	1005	4000	26.0
SEP.			
8...	1100	16700	26.5
29...	1120	13000	20.0
JUNE			
24...	1440	27400	22.0

BLUE RIVER BASIN

06893080 BLUE R NR STANLEY, KS . . . . (LAT 38 48 45 LONG 094 40 31)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976				MAY			
11...	0940	0.00	2.5	26...	1040	1.7	23.5
DEC.				1...	1900	252	20.0
9...	0940	0.04	0.5	1...	1920	293	20.0
JAN., 1977				1...	1945	324	20.0
10...	1015	0.05	0.5	JULY			
FEB.				7...	1000	3.3	26.0
10...	1420	0.07	0.5	AUG.			
MAR.				18...	1000	0.16	21.5
11...	1030	1.4	11.0	SEP.			
APR.				29...	0955	0.96	17.5
13...	1010	0.77	17.5				

06893300 INDIAN C AT OVERLAND PARK, KS . . . . (LAT 38 56 30 LONG 094 40 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
7...	1415	1.8	14.0	26...	1440	4.9	20.0
NOV.				31...	1200	10	21.0
11...	1345	0.02	6.0	JULY			
DEC.				7...	1320	2.1	32.5
9...	1250	0.80	1.5	11...	1545	153	24.0
JAN., 1977				AUG.			
10...	1405	0.54	0.5	18...	1230	2.3	25.0
FEB.				SEP.			
10...	1140	7.5	0.5	12...	1325	450	19.5
MAR.				29...	1150	5.2	19.0
11...	1350	97	12.5				
APR.							
13...	1320	20	19.0				

06893350 TOMAHAWK C NR OVERLAND PARK, KS . . . . (LAT 38 54 47 LONG 094 37 54)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
7...	1520	0.13	12.5	26...	1245	0.62	24.0
NOV.				31...	1010	8.5	19.5
11...	1115	0.14	5.5	JULY			
DEC.				7...	1110	3.2	20.0
9...	1110	0.20	1.5	11...	1710	67	24.5
JAN., 1977				AUG.			
10...	1215	0.30	0.5	18...	1100	0.26	22.0
FEB.				SEP.			
10...	1340	1.2	0.5	12...	1210	129	19.0
MAR.				29...	1045	276	18.0
11...	1205	2.2	12.0				
APR.							
13...	1145	0.99	15.5				

OSAGE RIVER BASIN

06910800 MARAIS DES CYGNES R NR READING, KS . . . . (LAT 38 34 00 LONG 095 57 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
5...	1150	0.04	17.0	11...	1145	0.67	19.0
NOV.				MAY			
9...	1230	0.02	12.5	24...	1423	124	21.0
DEC.				JUNE			
16...	0940	0.02	2.5	10...	1120	5800	19.5
JAN., 1977				23...	1300	304	22.5
11...	1130	0.01	0.5	30...	1525	188	23.5
FEB.				AUG.			
7...	1440	0.22	0.5	17...	1615	20	26.0
MAR.				SEP.			
14...	1145	1.2	13.0	27...	1055	26	20.5

06911500 SALT C NR LYNDON, KS . . . . (LAT 38 36 32 LONG 095 38 17)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976				MAY			
9...	1400	0.04	12.5	29...	1305	15	23.0
DEC.				JUNE			
15...	1105	0.09	0.5	10...	1215	4530	19.5
23...	1030	0.07	0.5	21...	1525	332	20.0
JAN., 1977				30...	1500	27	25.5
6...	1345	0.20	0.0	AUG.			
FEB.				16...	0910	3.6	23.5
8...	0900	0.16	0.0	SEP.			
MAR.				27...	1430	5.4	21.0
14...	1300	0.20	10.0				
APR.							
11...	1440	0.60	21.0				

06911900 DRAGOON C NR BURLINGAME, KS . . . . (LAT 38 42 30 LONG 095 50 20)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
MAY , 1977				AUG.			
26...	1105	61	19.0	17...	1507	0.0	26.5
JUNE				SEP.			
10...	1350	2080	20.0	27...	1010	0.0	21.0
30...	1010	52	23.0				

OSAGE RIVER BASIN

06912500 HUNDRED AND TEN MILE C NR QUENEMO, KS . . . (LAT 38 38 41 LONG 095 33 34)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
6...	1010	17	17.5	12...	1245	13	14.0
NOV.				MAY			
10...	1010	18	9.5	25...	1010	12	20.5
DEC.				JUNE			
8...	1530	23	1.5	30...	1115	1980	23.5
15...	1315	20	2.0	JULY			
JAN., 1977				28...	1000	868	25.5
6...	1130	2.1	2.5	AUG.			
FEB.				18...	1233	15	26.0
8...	1030	21	3.5	SEP.			
MAR.				20...	1025	17	21.0
15...	1030	10	9.5				

06913000 MARAIS DES CYGNES R NR POMONA, KS . . . . . (LAT 38 35 03 LONG 095 27 12)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
6...	1330	39	16.5	12...	1000	31	17.0
NOV.				MAY			
10...	1215	37	8.0	25...	1603	96	22.5
DEC.				JUNE			
16...	1405	38	2.0	23...	1050	7190	22.5
JAN., 1977				JULY			
11...	1615	34	6.5	1...	1020	4380	23.0
FEB.				AUG.			
8...	1310	39	1.5	19...	1530	135	25.0
MAR.				SEP.			
15...	1250	30	13.0	20...	0900	163	19.0

06913500 MARAIS DES CYGNES R NR OTTAWA, KS . . . . . (LAT 38 37 00 LONG 095 15 25)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
6...	1510	36	15.5	26...	1020	102	22.0
NOV.				JUNE			
10...	1420	33	6.0	24...	1300	6410	23.0
DEC.				24...	1500	5350	23.0
15...	1655	39	3.0	27...	1810	1550	24.5
JAN., 1977				JULY			
12...	1040	32	6.5	1...	1210	4070	23.0
FEB.				7...	1040	4770	26.0
8...	1430	46	3.5	AUG.			
MAR.				19...	1420	138	25.5
15...	1420	36	14.5	SEP.			
APR.				28...	1250	217	19.5
12...	1520	22	26.0				

06914000 POTTAWATOMIE C NR GARNETT, KS . . . . (LAT 38 20 01 LONG 095 14 55)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976				APR.			
17...	1205	0.11	5.0	28...	0820	0.12	19.0
DEC.				JUNE			
22...	1300	0.06	3.0	9...	1650	6.5	27.0
JAN., 1977				19...	1305	10900	20.5
20...	0930	0.08	4.5	JULY			
FEB.				21...	1505	4.1	30.0
16...	1515	0.19	5.0	SEP.			
MAR.				1...	1450	735	23.5
17...	0740	0.26	11.0				

06915000 BIG BULL C NR HILLSDALE, KS . . . . (LAT 38 38 12 LONG 094 53 29)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
MAR., 1977				JULY			
17...	1055	2.4	11.0	22...	1340	2.4	29.5
APR.				SEP.			
20...	1240	1.5	21.5	6...	1030	2.0	24.5
JUNE							
2...	1325	531	24.0				
2...	1625	438	24.0				
21...	1040	5150	21.5				
22...	1550	2870	21.0				

06916600 MARAIS DES CYGNES R NR KS-MO STATE LINE, KS (LAT 38 13 21 LONG 094 40 04)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
21...	1130	37	[illegible]	16...	1330	88	13.0
NOV.				APR.			
17...	0845	7.6	[illegible]	27...	1010	173	18.0
DEC.				JUNE			
23...	1020	7.6	[illegible]	9...	1150	189	25.0
JAN., 1977				27...	1310	29300	26.0
19...	1505	38	[illegible]	JULY			
FEB.				21...	1115	235	29.0
10...	1335	114	[illegible]				

OSAGE RIVER BASIN

06917000 LITTLE OSAGE R AT FULTON, KS . . . . (LAT 38 01 09 LONG 094 42 48)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
21...	0835	0.15	8.0
NOV.			
16...	1630	0.24	5.0
DEC.			
22...	1550	0.38	4.0
JAN., 1977			
19...	1230	0.43	2.5
FEB.			
14...	1600	0.96	5.5
MAR.			
16...	1140	1.7	15.0
APR.			
27...	1240	27	18.0
JUNE			
9...	0920	10	25.0
JULY			
21...	0925	10	28.0
SEP.			
1...	0910	8.7	23.5

06917380 MARMATON R NR MARMATON, KS . . . . (LAT 37 49 03 LONG 094 47 30)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976			
16...	1400	0.21	5.0
DEC.			
21...	1435	0.18	4.5
JAN., 1977			
19...	1000	0.01	0.0
FEB.			
15...	0820	1.0	2.0
MAR.			
16...	0925	6.3	11.0
APR.			
27...	0910	36	16.0
MAY			
17...	1125	952	18.0
JUNE			
8...	1720	17	25.0
19...	1730	4510	21.0
JULY			
20...	1650	7.9	29.5
AUG.			
31...	1700	11	25.0

ARKANSAS RIVER BASIN

07137000 FRONTIER D NR COOLIDGE, KS . . . . (LAT 38 02 18 LONG 102 02 19)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
DEC., 1976			
22...	1130	2.0	0.5
APR., 1977			
15...	1320	64	13.0
SEP.			
20...	1325	5.1	21.5

07137500 ARKANSAS R NR COOLIDGE, KS . . . . (LAT 38 01 34 LONG 102 00 41)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
1...	1115	17	17.0
NOV.			
2...	1530	12	14.0
13...	1200	5.9	8.0
DEC.			
22...	1350	7.5	4.5
JAN., 1977			
4...	1210	12	0.0
FEB.			
1...	1040	10	0.5
15...	1045	10	4.0
MAR.			
1...	1525	9.2	6.5
15...	1330	10	14.0
24...	1050	12	13.5
APR.			
13...	1105	181	12.0
13...	1500	142	12.5
21...	1100	50	9.0
MAY			
2...	1310	179	16.0
9...	1150	14	19.5
21...	1440	88	17.0
25...	1250	450	19.0
JUNE			
6...	1110	40	23.0
21...	1150	28	26.5
JULY			
6...	1105	9.5	29.0
19...	1340	1.7	31.0
AUG.			
2...	1110	20	24.5
4...	1335	222	27.5
23...	1125	560	25.0
SEP.			
7...	1050	7.6	22.5
20...	1055	4.8	18.0

07138000 ARKANSAS R AT SYRACUSE, KS . . . . (LAT 37 57 58 LONG 101 45 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
8...	1405	2.0	20.0
20...	1050	0.46	5.5
NOV.			
3...	1520	7.3	13.0
17...	1440	3.6	10.0
DEC.			
6...	1045	1.4	3.0
20...	1300	4.0	7.0
JAN., 1977			
14...	1440	1.5	0.0
FEB.			
4...	1050	0.0	1.0
15...	1440	8.7	11.5
MAR.			
9...	1040	7.9	9.5
31...	1130	8.7	11.0
APR.			
12...	1300	6.9	23.0
13...	1840	185	16.0
20...	1350	29	21.0
MAY			
2...	1110	456	9.0
2...	1600	218	17.5
5...	1320	80	20.0
25...	1550	1270	19.0
JUNE			
7...	1110	49	20.5
21...	1500	31	30.0
JULY			
7...	1045	2.2	26.0
19...	1055	0.93	27.0
AUG.			
4...	1120	5.9	26.5
23...	1430	291	27.0

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
ARKANSAS RIVER BASIN							
07138650 WHITEWOMAN C NR LEOTI, KS . . . . (LAT 38 28 52 LONG 101 29 16)							
MAY , 1977				AUG.			
26...	0900	40	17.0	11...	1345	4.5	21.5
26...	1030	8.1	12.5				
07139000 ARKANSAS R AT GARDEN CITY, KS . . . . (LAT 37 57 21 LONG 100 52 37)							
APR., 1977							
13...	0910	0.47	10.5				
21...	1615	11	9.0				
07139800 MULBERRY C NR DODGE CITY, KS . . . . (LAT 37 35 53 LONG 100 00 52)							
APR., 1977							
21...	1150	0.81	9.0				
07140000 ARKANSAS R NR KINSLEY, KS . . . . (LAT 37 55 33 LONG 099 22 31)							
OCT., 1976				APR.			
4...	1420	8.0	14.5	7...	1530	9.6	16.0
NOV.				MAY			
1...	1420	4.5	14.5	10...	1620	20	20.0
DEC.				24...	1320	360	26.0
8...	1335	10	5.0	JUNE			
JAN., 1977				28...	1250	15	24.0
5...	1320	10	2.5	AUG.			
FEB.				11...	1225	7.1	19.0
1...	1355	14	7.5	SEP.			
MAR.				14...	1140	24	20.0
4...	0915	11	2.0				
07140700 GUZZLERS GULCH NR NESS CITY, KS . . . . (LAT 38 17 40 LONG 099 57 10)							
APR., 1977				AUG.			
21...	1640	1.6	8.5	6...	1650	91	22.5
07141200 PAWNEE R NR LARNED, KS . . . . (LAT 38 12 00 LONG 099 20 50)							
MAY , 1977				SEP.			
10...	1340	0.28	19.0	14...	1025	2.1	21.0
AUG.							
12...	1705	978	20.5				
07141300 ARKANSAS R AT GREAT BEND, KS . . . . (LAT 38 21 11 LONG 098 45 50)							
OCT., 1976				MAY			
12...	1540	13	19.0	2...	1540	22	24.0
NOV.				JUNE			
16...	1620	9.0	9.0	20...	1535	15	26.5
DEC.				JULY			
13...	1450	7.1	6.5	20...	0930	19	23.0
JAN., 1977				AUG.			
25...	1405	8.3	6.0	16...	1715	439	23.0
FEB.				18...	0830	136	22.0
14...	1620	7.8	9.0				
MAR.							
22...	1605	2.9	16.0				
07141700 WALNUT C NR RUSH CENTER, KS . . . . (LAT 38 28 07 LONG 099 22 07)							
OCT., 1976				MAY			
12...	1100	0.19	13.0	5...	1040	0.23	17.5
FEB., 1977				AUG.			
14...	1355	1.2	2.0	17...	1035	1.9	22.0
07141900 WALNUT C AT ALBERT, KS . . . . (LAT 38 27 40 LONG 099 00 50)							
OCT., 1976				JUNE			
12...	1300	0.77	14.5	29...	1200	0.91	21.5
FEB., 1977				AUG.			
14...	1240	0.11	1.0	17...	1440	5.8	24.0
MAY							
9...	0842	0.01	18.0				
07142015 WALNUT C NR HEIZER, KS . . . . (LAT 38 25 11 LONG 098 58 40)							
OCT., 1976				JUNE			
12...	1400	0.22	17.0	29...	0950	3.5	20.5
FEB., 1977				AUG.			
14...	1510	0.31	4.0	17...	1605	14	25.0
MAY							
2...	1600	0.63	20.0				
10...	1310	244	18.0				

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
ARKANSAS RIVER BASIN							
07142300 RATTLESNAKE C NR MACKSVILLE, KS . . . . (LAT 37 52 20 LONG 098 52 30)							
OCT., 1976 13...	0905	17	13.0	JUNE 3...	1005	22	20.0
NOV. 17...	0952	23	4.5	29...	1230	57	24.0
JAN., 1977 26...	0932	27	3.0	JULY 19...	1120	14	25.0
FEB. 16...	0920	25	4.0	AUG. 16...	1330	16	22.0
MAR. 23...	1240	25	13.0				
07142575 RATTLESNAKE C NR ZENITH, KS . . . . (LAT 38 06 01 LONG 098 30 32)							
OCT., 1976 26...	1430	31	5.0	MAR. 23...	0940	45	8.0
NOV. 19...	1510	44	9.0	MAY 3...	1000	61	20.0
JAN., 1977 24...	1445	57	0.0	JUNE 29...	0930	202	23.0
FEB. 15...	0930	49	2.0	AUG. 18...	1050	31	22.0
07142620 RATTLESNAKE C NR RAYMOND, KS . . . . (LAT 38 13 50 LONG 098 25 00)							
OCT., 1976 26...	1245	3.9	6.0	MAR. 21...	1630	32	11.0
NOV. 19...	1330	13	9.0	MAY 4...	1600	93	25.0
DEC. 28...	1050	40	1.5	JUNE 28...	1500	227	23.0
JAN., 1977 24...	1240	50	0.0	AUG. 10...	1455	5.7	26.5
FEB. 15...	1130	50	2.5				
07142860 COW C NR CLAFLIN, KS . . . . (LAT 38 31 20 LONG 098 35 00)							
JAN., 1977 25...	1202	0.05	1.0	APR. 19...	1130	0.32	15.5
FEB. 14...	1000	0.02	1.5	JUNE 7...	1120	0.29	19.5
MAR. 29...	1120	0.74	10.0				
07142900 BLOOD C NR BOYD, KS . . . . (LAT 38 32 10 LONG 098 51 35)							
OCT., 1976 1...	1000	0.02	15.0	APR. 19...	1310	0.03	16.0
NOV. 16...	1302	0.20	2.0	MAY 2...	1245	541	16.0
JAN., 1977 25...	1102	0.42	0.0	JUNE 7...	1225	1.2	21.0
FEB. 14...	1105	0.51	1.0	JULY 28...	0930	0.65	21.0
MAR. 22...	1400	0.09	10.0	SEP. 8...	1130	0.55	22.0
07143300 COW C NR LYONS, KS . . . . (LAT 38 18 30 LONG 098 11 30)							
OCT., 1976 26...	1020	4.5	7.0	MAY 11...	1230	7.7	17.5
NOV. 19...	0930	5.4	3.0	JUNE 20...	1225	14	23.0
				23...	1250	605	26.0
JAN., 1977 24...	1020	8.6	0.0	29...	1150	432	25.0
FEB. 15...	1430	10	3.0	AUG. 16...	1000	9.3	25.0
MAR. 21...	1320	7.6	10.0				
07143330 ARKANSAS R NR HUTCHINSON, KS . . . . (LAT 37 56 47 LONG 097 46 29)							
OCT., 1976 27...	1055	160	6.0	MAY 18...	1435	153	20.0
				21...	1600	1570	19.0
NOV. 18...	1150	124	8.0	JUNE 29...	1000	1000	27.0
DEC. 29...	1115	143	1.0	AUG. 09...	1130	908	25.0
JAN., 1977 27...	1010	160	1.0	SEP. 8...	1400	5060	20.0
FEB. 17...	0920	186	4.0				
MAR. 28...	0810	180	10.0				

MISCELLANEOUS WATER TEMPERATURES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ARKANSAS RIVER BASIN

07143665 LITTLE ARKANSAS R AT ALTA MILLS, KS . . . . (LAT 38 06 44 LONG 097 35 30)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
27...	1330	7.3	7.0
NOV.			
18...	1600	8.1	5.0
DEC.			
30...	1005	8.6	0.5
JAN., 1977			
27...	1140	12	3.0
FEB.			
17...	1050	12	3.0
MAR.			
25...	1210	7.8	12.0
MAY			
12...	1120	9.1	19.0
23...	1630	940	20.0
JUNE			
29...	1230	759	26.0
AUG.			
15...	1330	48	24.5
24...	1420	632	24.0
SEP.			
2...	1600	3530	26.0

07144200 LITTLE ARKANSAS R AT VALLEY CENTER, KS . . (LAT 37 49 56 LONG 097 23 16)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
4...	1220	30	18.0
NOV.			
3...	1330	37	11.0
JAN., 1977			
14...	1125	35	0.0
FEB.			
2...	1145	30	3.0
MAR.			
2...	1130	35	7.0
APR.			
18...	1130	97	18.0
MAY			
24...	1350	1600	21.5
26...	1415	265	24.0
JUNE			
21...	1220	2500	25.0
JULY			
18...	1500	93	27.0
SEP.			
9...	1600	338	23.5
JUNE			
21...	1145	4630	24.0
22...	1205	5010	24.5
24...	1310	4590	21.0
28...	1255	3250	24.0
SEP.			
9...	1420	0.11	23.0

07144300 ARKANSAS R AT WICHITA, KS . . . . (LAT 37 38 41 LONG 097 20 06)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
4...	1615	293	18.0
NOV.			
3...	0930	196	8.5
JAN., 1977			
13...	1200	92	0.0
26...	1205	187	3.0
FEB.			
1...	1200	217	1.0
MAR.			
21...	1200	181	8.0
APR.			
18...	1550	356	16.0
MAY			
25...	1150	2010	20.0
27...	1130	731	21.5
JUNE			
23...	1050	12400	20.0
30...	1300	3660	25.0
JULY			
18...	1210	400	28.0
SEP.			
20...	1500	1020	23.0
JUNE			
23...	1330	1050	21.0
24...	1205	293	24.0
28...	1100	20	26.0

07144550 ARKANSAS R AT DERBY, KS . . . . (LAT 37 32 34 LONG 097 16 31)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
5...	0925	390	13.5
NOV.			
5...	0945	232	5.0
JAN., 1977			
24...	1200	236	3.0
FEB.			
16...	1015	265	3.0
MAR.			
21...	1435	232	12.0
APR.			
19...	0950	465	16.5
JUNE			
1...	1200	3260	19.0
JULY			
19...	0935	432	26.0
SEP.			
21...	0950	1040	20.5

07144780 NF NINNESCAH R AB CHENEY RE, KS . . . . (LAT 37 50 41 LONG 097 56 09)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
1...	1105	38	18.0
14...	1145	26	10.0
NOV.			
5...	0955	48	2.5
19...	0925	52	3.5
DEC.			
16...	1015	58	0.5
29...	0915	60	0.5
JAN., 1977			
14...	1700	39	0.0
26...	1510	78	0.0
FEB.			
16...	1530	72	7.0
MAR.			
3...	1630	78	6.0
24...	1530	53	17.0
APR.			
8...	0920	79	15.0
22...	1110	173	13.0
MAY			
6...	1225	96	22.5
17...	1330	87	23.5
27...	1115	244	20.5
JUNE			
2...	1140	1060	23.0
16...	1100	80	23.0
27...	1110	403	26.0
JULY			
28...	1300	44	27.0
AUG.			
8...	1245	126	27.5
23...	1040	1320	23.0
SEP.			
1...	1830	12500	24.0
2...	1200	4000	26.0
16...	1050	380	21.0
29...	1200	109	20.0

ARKANSAS RIVER BASIN

07144795 NF NINNESCAH R AT CHENEY DAM, KS . . . . . . (LAT 37 43 17 LONG 097 47 39)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
14...	1030	0.27	15.0	22...	1320	0.32	15.0
DEC.				MAY			
29...	1310	0.28	3.0	26...	1625	862	20.5
JAN., 1977				JUNE			
27...	0900	0.24	3.0	2...	1410	1660	22.0
FEB.				30...	1340	1570	21.0
16...	1425	0.25	0.0	AUG.			
MAR.				23...	1410	416	24.5
24...	1320	0.28	19.0				

07144850 SF SF NINNESCAH R NR PRATT, KS . . . . (LAT 37 35 10 LONG 098 49 40)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
MAY , 1977							
23...	1235	54	18.0				

07145200 SF NINNESCAH R NR MURDOCK, KS . . . . (LAT 37 33 51 LONG 097 51 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
14...	0830	76	13.0	24...	1040	126	11.5
NOV.				MAY			
15...	1425	119	5.0	18...	1130	167	24.0
DEC.				21...	1410	2690	19.5
29...	1430	115	4.0	JUNE			
JAN., 1977				30...	1100	126	24.0
26...	1315	181	0.0	AUG.			
FEB.				19...	1310	303	21.5
16...	1235	143	3.0				

07145500 NINNESCAH R NR PECK, KS . . . . (LAT 37 27 34 LONG 097 25 20)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
5...	1315	78	18.0	22...	0925	120	6.5
NOV.				APR.			
4...	1420	122	11.5	19...	1315	781	20.5
DEC.				MAY			
9...	1220	110	0.5	22...	1405	3920	20.0
JAN., 1977				JULY			
24...	1450	172	0.0	19...	1205	92	28.5
FEB.							
15...	1150	140	4.0				

07145700 SLATE C AT WELLINGTON, KS . . . . (LAT 37 15 00 LONG 097 24 12)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
5...	1610	0.65	16.0	23...	1125	3.1	9.5
NOV.				APR.			
10...	0830	2.6	3.5	19...	1555	32	20.0
DEC.				JUNE			
8...	0850	3.4	1.0	2...	1045	49	21.5
JAN., 1977				JULY			
26...	0900	5.6	3.0	19...	1505	0.52	27.5
FEB.				AUG.			
15...	1350	4.2	5.5	30...	1625	60	23.5

07146500 ARKANSAS R AT ARKANSAS CITY, KS . . . . (LAT 37 03 23 LONG 097 03 32)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
2...	1350	506	16.0	6...	0955	520	12.0
NOV.				MAY			
4...	1020	487	7.5	4...	1010	722	22.5
DEC.				26...	1440	5560	24.0
7...	1520	385	0.0	JUNE			
JAN., 1977				9...	1420	2580	23.5
13...	1240	314	0.0	23...	1020	10200	22.0
FEB.				JULY			
2...	1110	601	0.0	7...	1330	3680	26.0
MAR.				AUG.			
2...	0920	398	5.5	3...	1540	1110	30.0

07146570 COLE C NR DEGRAFF, KS . . . . (LAT 37 56 50 LONG 096 46 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
FEB., 1977				JUNE			
10...	1305	0.36	3.5	3...	1200	6.4	19.0
APR.				22...	1620	332	21.0
12...	1040	0.04	16.5	JULY			
20...	1120	0.33	20.5	25...	1205	0.55	27.5
MAY				SEP.			
12...	1125	0.22	17.5	19...	1305	0.32	20.5
21...	1700	173	18.5				

07147070 WHITEWATER R AT TOWANDA, KS . . . . (LAT 37 47 45 LONG 097 00 45)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
7...	1415	3.6	15.0	22...	1000	1170	17.0
NOV.				JUNE			
3...	0930	5.2	10.0	6...	1145	40	23.0
DEC.				22...	1310	7040	20.5
9...	1530	7.9	2.0	JULY			
JAN., 1977				21...	1150	19	28.0
20...	1135	7.4	0.0	AUG.			
FEB.				12...	1250	800	21.0
10...	1100	12	2.5	SEP.			
APR.				21...	1305	38	22.0
12...	1255	7.8	16.0				

ARKANSAS RIVER BASIN

07147800 WALNUT R AT WINFIELD, KS . . . . (LAT 37 13 27 LONG 096 59 40)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
6...	1600	40	17.5	27...	1530	1910	23.5
NOV.				JUNE			
3...	1600	59	11.0	23...	1530	26300	24.5
JAN., 1977				24...	0935	34300	23.0
25...	0930	60	2.0	JULY			
FEB.				20...	0915	186	27.0
17...	0940	51	6.5	AUG.			
MAR.				31...	1425	717	26.5
23...	0855	32	11.5				
APR.							
20...	1405	605	16.0				

07149000 MEDICINE LODGE R NR KIOWA, KS . . . . (LAT 37 02 17 LONG 098 28 04)

OCT., 1976				APR.			
13...	1305	26	21.0	7...	1015	73	14.5
NOV.				MAY			
17...	1630	63	8.0	5...	0950	89	20.0
DEC.				22...	1505	218	24.0
8...	1630	79	0.5	JUNE			
JAN., 1977				10...	1145	62	20.0
14...	1210	36	0.0	JULY			
FEB.				8...	0900	23	24.0
3...	1410	93	3.5	AUG.			
MAR.				5...	1045	18	23.5
3...	0930	72	2.0				

07151500 CHIKASKIA R NR CORBIN, KS . . . . (LAT 37 07 44 LONG 097 36 04)

OCT., 1976				MAR.			
6...	1145	23	12.0	22...	1440	44	13.5
NOV.				APR.			
4...	1330	42	9.0	20...	0955	224	19.0
DEC.				JUNE			
8...	1115	12	0.5	2...	1420	246	20.0
JAN., 1977				JULY			
25...	1330	67	0.0	20...	1400	18	27.5
FEB.				AUG.			
16...	1420	68	6.0	31...	1010	696	24.0

07155590 CIMMARON R NR ELKHART, KS . . . . (LAT 37 07 30 LONG 101 53 50)

MAY , 1977				AUG.			
12...	1220	6.2	24.5	9...	1530	119	29.0
15...	1300	3240	17.0	19...	1230	468	21.0
15...	1620	1470	17.0	SEP.			
JUNE				3...	0945	174	20.0
22...	1145	41	22.5	8...	1250	32	25.5

07156010 NF CIMARRON R AT RICHFIELD, KS . . . . (LAT 37 15 30 LONG 101 46 30)

NOV., 1976				AUG.			
3...	1215	0.07	15.0	9...	1355	9.4	25.0
MAY , 1977				SEP.			
15...	1130	127	17.0	3...	0750	849	19.5
15...	1820	41	18.5				
19...	1420	258	18.5				

07156100 SAND ARROYO C NR JOHNSON, KS . . . . (LAT 37 30 00 LONG 101 45 40)

APR., 1977				MAY			
21...	1635	22	7.0	19...	1140	2.6	16.0

07156220 BEAR C NR JOHNSON, KS . . . . (LAT 37 37 35 LONG 101 45 40)

APR., 1977							
21...	1200	113	17.0				

07157500 CROOKED C NR NYE, KS . . . . (LAT 37 02 02 LONG 100 11 55)

OCT., 1976				MAY			
1...	1515	4.3	30.0	12...	1455	26	25.0
NOV.				JUNE			
2...	1615	8.2	14.0	23...	1300	2.4	32.0
DEC.				AUG.			
7...	1045	3.9	0.0	19...	2035	705	20.0
JAN., 1977				20...	1215	142	20.5
7...	1125	5.8	0.0	21...	1135	59	26.0
MAR.				SEP.			
2...	1310	14	12.0	12...	1530	11	31.0
29...	1450	9.9	11.0				

ARKANSAS RIVER BASIN

07157740 CIMARRON R NR BUTTERMILK, KS . . . . (LAT 37 01 36 LONG 099 28 55)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976				APR.			
2...	1235	22	15.5	22...	1225	137	14.0
DEC.				MAY			
7...	1725	37	2.0	11...	1535	250	22.0
JAN., 1977				28...	2050	2170	23.5
6...	1310	3.0	0.0	30...	1415	227	25.0
FEB.				JUNE			
2...	1315	145	0.0	24...	1625	1.5	34.0
MAR.							
30...	1535	3.0	14.5				

07157900 CAVALRY C AT COLDWATER, KS . . . . (LAT 37 16 00 LONG 099 20 40)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
6...	1510	1.4	15.5	1...	0910	1.0	13.5
NOV.				MAY			
2...	1945	1.5	12.0	12...	1010	1.5	16.0
DEC.				JUNE			
8...	0930	1.2	2.0	23...	1710	16	19.5
JAN., 1977				24...	0845	2.0	19.0
6...	0940	2.0	3.0	AUG.			
20...	1050	1.7	3.0	11...	0925	1.0	19.0
FEB.				SEP.			
2...	0925	2.0	6.0	13...	1505	1.2	23.5
MAR.							
3...	1435	1.5	11.5				

07157940 BLUFF C NR BUTTERMILK, KS . . . . (LAT 37 01 55 LONG 099 28 45)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
6...	1015	3.7	13.0	11...	1155	32	22.0
NOV.				28...	2300	95	24.0
2...	1340	7.1	10.0	31...	1710	40	26.5
DEC.				JUNE			
7...	1510	16	5.0	24...	1100	101	23.0
JAN., 1977				AUG.			
6...	1525	16	1.5	10...	1615	0.54	34.0
FEB.				SEP.			
2...	1705	25	3.0	13...	1200	1.5	21.0
MAR.							
31...	1500	16	14.0				

07166000 VERDIGRIS R NR COYVILLE, KS . . . . (LAT 37 42 20 LONG 095 54 20)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
6...	1400	8.7	16.5	3...	1000	67	17.0
27...	1030	7.3	9.5	12...	1330	9.0	22.0
NOV.				19...	1130	354	22.0
15...	1445	5.8	4.0	25...	0950	2020	23.0
DEC.				JUNE			
13...	1330	4.6	1.0	2...	0930	2680	22.5
29...	1015	4.1	1.5	9...	1015	1370	24.0
JAN., 1977				JULY			
10...	1245	3.8	0.0	1...	0830	2700	26.0
FEB.				20...	0930	183	26.5
9...	0930	4.3	3.5	AUG.			
MAR.				15...	0945	585	25.0
2...	0930	5.6	9.0	17...	1315	614	24.5
29...	1145	5.9	12.5	31...	0900	575	24.5
APR.				SEP.			
20...	1015	8.8	19.0	22...	0945	99	21.0

07166500 VERDIGRIS R NR ALTOONA, KS . . . . (LAT 37 29 26 LONG 095 40 49)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
5...	1245	250	19.0	12...	1230	28	22.0
27...	1315	11	10.0	JUNE			
NOV.				1...	1100	2830	22.5
17...	1300	11	6.5	9...	1205	1540	23.5
DEC.				21...	1035	9630	22.5
9...	1115	41	2.5	23...	1410	14300	22.5
29...	1225	32	2.5	JULY			
JAN., 1977				1...	1145	2820	26.5
20...	1030	19	0.0	19...	1000	340	29.0
FEB.				AUG.			
9...	1015	13	3.0	8...	1115	266	26.5
28...	1000	13	6.5	31...	1245	787	24.5
MAR.				SEP.			
28...	1230	19	13.5	20...	0930	537	21.0
APR.							
20...	1130	80	19.0				

ARKANSAS RIVER BASIN

07167500 OTTER C AT CLIMAX, KS . . . . (LAT 37 42 30 LONG 096 13 30)

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
1...	1650	0.17	19.0	16...	1110	6.2	22.0
20...	1340	0.21	7.0	25...	1245	100	22.5
NOV.				JUNE			
15...	1005	0.37	2.0	22...	1115	16500	22.5
DEC.				JULY			
8...	0940	0.57	2.5	12...	1400	15	26.5
27...	1005	0.37	2.5	18...	1110	9.3	28.5
JAN., 1977				AUG.			
17...	1420	0.30	0.0	8...	1210	3.0	26.5
FEB.				SEP.			
11...	0940	0.50	1.5	1...	1120	309	25.5
20...	0940	0.47	3.5	19...	0915	274	20.0
MAR.							
11...	1510	0.94	9.0				
APR.							
4...	1015	0.40	11.5				
14...	1415	71	17.5				
26...	0845	9.9	15.5				

07168500 FALL R NR FALL R, KS . . . . (LAT 37 38 34 LONG 096 03 33)

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
1...	0940	0.03	18.0	16...	1215	17	21.5
20...	1500	18	8.0	25...	1520	2770	23.5
NOV.				JUNE			
15...	1130	17	5.0	8...	0945	751	23.0
DEC.				13...	1045	160	22.0
8...	1115	17	0.0	JULY			
27...	1205	17	7.0	1...	1120	3820	26.0
JAN., 1977				18...	0945	329	28.0
18...	1040	13	0.0	AUG.			
FEB.				8...	1315	20	28.0
11...	1130	14	4.5	SEP.			
28...	1115	16	6.5	1...	0910	830	25.5
MAR.				19...	1115	516	22.0
11...	1130	16	9.0				
APR.							
4...	1130	16	12.5				
26...	1015	17	17.5				

07169500 FALL R AT FREDONIA, KS . . . . (LAT 37 30 30 LONG 095 50 00)

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
5...	1415	211	19.0	14...	1100	1060	17.5
27...	1415	25	9.5	27...	0945	28	17.5
NOV.				MAY			
17...	1430	24	6.5	17...	1215	175	22.0
DEC.				JUNE			
9...	1245	23	2.5	1...	1300	1890	23.0
29...	1335	23	3.5	15...	1415	185	27.5
JAN., 1977				23...	0950	11800	22.5
20...	1230	19	0.0	JULY			
FEB.				1...	1000	4000	27.0
9...	1100	20	2.5	20...	1115	411	28.5
MAR.				AUG.			
2...	1240	22	5.5	30...	1130	561	34.0
14...	1415	27	10.5	SEP.			
30...	1400	27	15.5	20...	1130	584	22.0

07169800 ELK R AT ELK FALLS, KS . . . . (LAT 37 22 32 LONG 096 11 07)

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
13...	1330	4.7	17.0	15...	1050	186	16.5
NOV.				MAY			
5...	1015	6.8	7.5	10...	1000	47	21.5
23...	1430	3.4	6.5	27...	1030	191	22.0
DEC.				JUNE			
14...	1315	3.1	4.5	22...	1250	23900	22.5
JAN., 1977				28...	1410	755	27.0
3...	1300	2.8	1.5	JULY			
25...	1100	3.8	2.0	15...	1300	33	29.0
FEB.				AUG.			
14...	1400	5.8	6.5	10...	1300	10	30.0
MAR.				23...	1320	282	28.0
2...	1030	3.5	7.5	SEP.			
29...	1400	26	14.5	12...	1230	156	24.5

07170060 ELK R BL ELK CITY LK, KS . . . . (LAT 37 16 46 LONG 095 46 53)

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
4...	1515	2.4	20.5	10...	1130	22	21.5
26...	1215	2.8	11.0	3...	1250	601	12.5
NOV.				JUNE			
16...	1400	2.7	5.5	1...	1045	1050	24.5
DEC.				30...	1100	8330	25.5
28...	1440	0.58	3.5	JULY			
JAN., 1977				6...	1130	7460	26.5
19...	1320	0.75	1.5	11...	1345	3400	27.0
FEB.				22...	1330	14	27.0
9...	1440	0.95	3.5	AUG.			
23...	1230	1.1	8.0	12...	1130	12	26.5
MAR.				19...	1015	414	24.5
28...	1100	1.3	12.5	29...	1000	376	24.5
APR.				SEP.			
19...	1145	3.6	19.0	19...	1130	771	22.0

ARKANSAS RIVER BASIN

07170500 VERDIGRIS R AT INDEPENDENCE, KS . . . . . . (LAT 37 13 26 LONG 095 40 43)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAY			
4...	1315	23	21.0	12...	1030	108	21.0
26...	1400	36	11.0	27...	1330	8090	22.5
NOV.				JUNE			
16...	1145	45	4.5	21...	1400	13100	22.5
DEC.				23...	1500	29500	25.6
6...	1430	63	2.5	24...	0845	29700	24.5
28...	1300	54	4.5	30...	1530	15500	24.5
JAN., 1977				JULY			
20...	1315	410	8.5	22...	1140	821	27.5
FEB.				AUG.			
2...	1300	35	1.5	12...	1330	5650	26.5
9...	1230	32	3.5	29...	1215	3900	25.0
28...	1115	36	9.0	SEP.			
MAR.				16...	1430	2130	22.0
28...	1400	55	13.5				
APR.							
19...	1400	187	21.0				

07170700 BIG HILL C NR CHERRYVALE, KS . . . . (LAT 37 16 00 LONG 095 28 05)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				JUNE			
26...	1510	0.25	10.0	20...	1430	1590	23.0
NOV.				28...	1145	19	26.5
16...	1015	0.18	4.0	JULY			
DEC.				19...	1145	0.68	28.5
6...	1320	0.13	2.5	AUG.			
28...	1100	0.04	3.5	2...	1300	0.37	36.0
JAN., 1977				3...	1300	0.27	25.0
20...	1130	0.02	0.5	4...	1055	0.51	27.5
FEB.				5...	1410	0.11	25.0
7...	1240	0.08	3.5	10...	1120	0.39	27.0
22...	1405	0.87	11.5	22...	1205	0.14	26.0
MAR.				SEP.			
17...	1550	2.2	14.5	12...	1040	1.2	23.5
APR.							
5...	1515	1.0	13.5				
18...	1245	0.18	20.0				
MAY							
11...	1420	0.30	24.0				
20...	1350	198	21.5				
24...	1130	14	23.5				
21...	1100	14	21.5				

07172000 CANEY R NR ELGIN, KS . . . . (LAT 37 00 13 LONG 096 18 54)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				APR.			
13...	1045	1.4	18.0	15...	1300	273	18.0
NOV.				MAY			
5...	1300	2.0	10.0	9...	1420	165	20.5
23...	1245	3.3	10.0	26...	1430	969	24.5
DEC.				JUNE			
14...	1100	3.0	3.5	28...	1130	2310	26.5
JAN., 1977				JULY			
3...	1115	2.8	1.5	15...	1100	46	28.0
25...	1255	4.0	2.5	AUG.			
FEB.				10...	1100	17	27.5
14...	1015	7.3	7.0	23...	1045	3240	26.5
MAR.				SEP.			
1...	1445	3.4	11.0	12...	1045	78	24.5
29...	1130	3.4	15.5				

07179500 NEOSHO R AT COUNCIL GROVE, KS . . . . (LAT 38 39 54 LONG 096 29 28)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
13...	1730	22	13.5	8...	0850	11	6.5
JAN., 1977				APR.			
19...	1030	10	0.5	20...	1525	12	17.0
FEB.				SEP.			
10...	0940	10	4.0	9...	1310	13	24.5

07179730 NEOSHO R NR AMERICUS, KS . . . . (LAT 38 35 LONG 096 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976				MAR.			
13...	1445	19	14.0	7...	1605	14	9.0
NOV.				APR.			
22...	1505	6.6	3.0	20...	0930	16	18.0
DEC.				AUG.			
1...	1315	5.1	1.5	1...	1330	66	25.0
JAN., 1977				SEP.			
18...	1525	12	1.0	9...	1015	140	23.0
FEB.							
9...	1555	16	3.5				

MISCELLANEOUS WATER TEMPERATURES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ARKANSAS RIVER BASIN

07179795 COTTONWOOD R BL MARION LK, KS . . . . (LAT 38 22 00 LONG 097 05 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
NOV., 1976			
10...	1145	7.0	7.5
JAN., 1977			
17...	1135	1.9	3.0
FEB.			
8...	1125	1.8	4.0
MAR.			
1...	1130	1.2	1.5
APR.			
19...	1045	4.4	14.0
JUNE			
7...	1155	170	23.5

07180400 COTTONWOOD R NR FLORENCE, KS . . . . (LAT 38 14 10 LONG 096 52 37)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
13...	0830	32	11.0
NOV.			
11...	0940	30	4.0
JAN., 1977			
18...	1010	31	0.0
FEB.			
9...	0945	33	0.5
MAR.			
2...	0905	28	4.5
APR.			
19...	1625	49	19.5
JUNE			
20...	1510	8060	23.0
SEP.			
8...	0950	170	23.5

07180500 CEDAR C NR CEDAR POINT, KS . . . . (LAT 38 11 55 LONG 096 49 22)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
12...	1455	2.2	12.0
NOV.			
10...	1510	2.6	6.0
JAN., 1977			
17...	1500	3.5	0.5
FEB.			
8...	1445	3.5	2.0
MAR.			
1...	1445	2.9	3.0
APR.			
19...	1400	7.1	21.0
JUNE			
20...	1200	4230	23.5
SEP.			
7...	1425	30	24.0

07182250 COTTONWOOD R NR PLYMOUTH, KS . . . . (LAT 38 23 51 LONG 096 21 21)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
13...	1200	41	13.5
JAN., 1977			
27...	1045	54	0.0
FEB.			
9...	1340	60	0.5
MAR.			
7...	1320	46	8.0
APR.			
20...	1155	70	19.0
SEP.			
8...	1540	440	27.5

07182510 NEOSHO R AT BURLINGTON, KS . . . . (LAT 38 11 40 LONG 095 44 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
18...	1500	50	12.0
NOV.			
15...	0950	43	5.0
DEC.			
20...	1040	41	2.0
JAN., 1977			
17...	1205	48	1.0
FEB.			
16...	1230	45	4.5
MAR.			
14...	1100	45	13.0
APR.			
25...	1105	43	19.0
JUNE			
6...	1245	7270	26.0
JULY			
18...	1110	3500	28.0
AUG.			
29...	1240	1670	25.0

07183000 NEOSHO R NR IOLA, KS . . . . (LAT 37 53 27 LONG 095 25 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
19...	0940	51	11.0
NOV.			
15...	1430	47	5.0
DEC.			
20...	1350	45	4.5
JAN., 1977			
17...	1550	44	0.0
FEB.			
16...	0840	48	3.5
MAR.			
14...	1540	55	14.0
APR.			
25...	1540	77	21.0
JUNE			
7...	0940	7200	25.0
29...	1040	13300	25.0
JULY			
18...	1620	4320	28.5
AUG.			
29...	1730	2030	24.0

07183500 NEOSHO R NR PARSONS, KS . . . . (LAT 37 18 30 LONG 095 06 40)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
20...	1400	41	14.0
NOV.			
16...	0905	43	7.0
DEC.			
21...	0935	50	4.0
JAN., 1977			
18...	1230	55	0.5
FEB.			
15...	1515	83	5.5
MAR.			
15...	1720	140	16.0
APR.			
26...	1020	140	20.0
JUNE			
8...	0950	7280	25.0
JULY			
20...	0935	2460	29.0
AUG.			
31...	1005	3510	24.0

07184000 LIGHTNING C NR MCCUNE, KS . . . . (LAT 37 16 54 LONG 095 01 56)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)
OCT., 1976			
20...	1000	0.02	6.5
NOV.			
16...	1125	0.13	5.0
DEC.			
21...	1220	0.05	4.0
JAN., 1977			
18...	1430	0.03	0.0
FEB.			
15...	1300	2.1	4.0
MAR.			
15...	1455	5.6	15.0
APR.			
26...	1535	18	18.0
MAY			
19...	1140	52	21.0
JUNE			
8...	1300	2.8	24.0
JULY			
20...	1155	2.3	28.0
AUG.			
17...	1220	156	24.0
31...	1230	7.2	24.5

ARKANSAS RIVER BASIN

07184100 LIGHTNING C NR OSWEGO, KS . . . . (LAT 37 10 49 LONG 095 04 11)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)
OCT., 1976				MAR.			
20...	1100	1.8	9.0	15...	1340	11	15.0
NOV.				APR.			
16...	1445	2.4	6.0	20...	1005	2.2	19.5
DEC.				MAY			
28...	1455	2.3	4.0	2...	1610	318	21.0
JAN., 1977				3...	1145	176	21.0
18...	1510	2.5	1.0	18...	1315	337	23.0
FEB.							
16...	1110	7.1	4.5				

07184300 CHERRY C NR HALLOWELL, KS . . . . (LAT 37 09 46 LONG 094 59 43)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)
OCT., 1976				MAY			
19...	1325	0.50	8.5	2...	1450	964	19.5
NOV.				3...	1015	99	18.5
16...	1335	1.4	4.0	18...	1045	6.1	20.5
DEC.				JUNE			
28...	1305	1.0	3.0	14...	0920	2.9	24.0
JAN., 1977				20...	1700	1290	22.0
18...	1355	0.94	0.5	22...	1210	2520	22.0
FEB.				JULY			
16...	0955	2.4	2.0	19...	1345	11	27.5
MAR.				AUG.			
15...	1520	2.0	14.5	16...	0725	43	23.5
APR.				SEP.			
20...	0810	1.2	18.0	20...	1200	21	20.0

07186040 COW C NR WEIR, KS . . . . (LAT 37 18 35 LONG 094 40 48)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)
OCT., 1976				MAY			
19...	0920	3.3	9.0	2...	1240	153	19.0
NOV.				18...	0845	73	19.0
16...	0840	4.0	3.5	JUNE			
DEC.				13...	1525	5.8	27.5
27...	1500	4.6	4.5	19...	2120	1640	22.0
JAN., 1977				21...	0930	6440	22.5
17...	1440	5.1	1.0	JULY			
FEB.				19...	1000	17	27.5
15...	0830	12	3.5	AUG.			
MAR.				16...	1040	18	25.0
14...	1550	16	14.0	SEP.			
APR.				22...	0835	63	19.5
19...	0820	14	18.5				

[SYMBOLS IN TABLE AFTER WATER-LEVEL MEASUREMENTS DESIGNATE CONDITIONS AS FOLLOWS: A, WELL BEING PUMPED; B, WELL PUMPED RECENTLY; C, NEARBY WELL BEING PUMPED; D, NEARBY WELL PUMPED RECENTLY; E, ESTIMATED; F, DRY; G, MEASUREMENT BY ANOTHER AGENCY; H, TAPE MEASUREMENT (RECORDER); I, AFFECTED BY ATMOSPHERIC PRESSURE; AND J, OTHER.]

****** ALLEN COUNTY

375528095263701. 24-18E-28CDD. K.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 6 INCHES, DEPTH 23 FEET. MEASURING POINT, TOP OF CASING, 1.70 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 948 FEET.
HIGHEST WATER LEVEL 2.30 BELOW LSD, MAR. 20, 1973.
LOWEST WATER LEVEL 16.10 BELOW LSD, JULY 29, 1964.
RECORDS AVAILABLE 1964, 1967-77.

DEC. 6, 1976 14.08, JUNE16, 1977 12.12, SEP.15, 1977 9.60.

****** BARBER COUNTY

372003098594401. 31-15W-19BDB. (1) D. S. SHAW. DRILLED, UNUSED, WATER-TABLE WELL IN DEPOSITS OF PERMIAN AGE. DIAMETER 8 TO 6 INCHES, DEPTH 95 FEET. MEASURING POINT, TOP OF WELL COVER, 1.05 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 34.45 BELOW LSD, DEC. 17, 1974.
LOWEST WATER LEVEL 82.99 BELOW LSD, OCT. 17, 1940.
RECORDS AVAILABLE 1940-64, 1966-67, 1969, 1971-72, 1974-76.

DEC.20, 1976 36.23.

371416098334701. 32-11W-30BBA. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 1.25 INCHES, DEPTH 32 FEET. MEASURING POINT, TOP OF PIPE, 3.00 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 2.30 BELOW LSD, MAR. 19, 1973.
LOWEST WATER LEVEL 6.63 BELOW LSD, AUG. 27, 1964.
RECORDS AVAILABLE 1963-77.

DEC.20, 1976 4.26, MAR.29, 1977 3.31, JUNE16, 1977 4.30, SEP.29, 1977 4.24.

371710098374501. 32-12W-4DBC. (4) MADGE EVANS. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM, DIAMETER 16 INCHES, DEPTH 66 FEET. MEASURING POINT, TOP SOUTH SIDE OF PUMP BASE, 0.80 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 12.50 BELOW LSD, JUNE 22, 1949.
LOWEST WATER LEVEL 20.07 BELOW LSD, DEC. 20, 1966.
RECORDS AVAILABLE 1940-77.

DEC.20, 1976 15.55, MAR.29, 1977 15.40, JUNE16, 1977 15.25, SEP.29, 1977 15.16.

370837098314201. 33-11W-28CBB ALBERT HARBAUGH. DRILLED WATER-TABLE WELL IN ALLUVIUM, DIAMETER 6 INCHES, DEPTH 29 FEET. MEASURING POINT, TOP WEST EDGE OF 6-INCH COUPLING, 2.50 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 1.73 BELOW LSD, SEP. 25, 1973.
LOWEST WATER LEVEL 5.23 BELOW LSD, JULY 30, 1964.
RECORDS AVAILABLE 1963-77.

DEC.20, 1976 3.90, MAR.29, 1977 4.01, JUNE16, 1977 4.34, SEP.29, 1977 4.13.

370522098575401. 34-15W-17ADA (8) P. BRACK. DUG, UNUSED, WATER-TABLE WELL IN ALLUVIUM, DIAMETER 36 INCHES, DEPTH 26 FEET, CRIBBED WITH BRICK. MEASURING POINT, TOP NORTH SIDE OF CURB, 0.60 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 8.87 BELOW LSD, NOV. 21, 1941.
LOWEST WATER LEVEL 21.01 BELOW LSD, APR. 3, 1957.
RECORDS AVAILABLE 1940-64, 1966-67, 1969, 1971-72, 1974-76.

DEC.20, 1976 19.83.

370456098590801. 34-15W-18DDB. (9) V. D. WELLS. DRIVEN, UNUSED, WATER-TABLE WELL IN ALLUVIUM, DIAMETER 1 INCH, DEPTH 6 FEET. MEASURING POINT, TOP OF PIPE, 3.50 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
DISCONTINUED APRIL 1977.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 1.07 BELOW LSD, JUNE 20, 1951.
LOWEST WATER LEVEL 4.54 BELOW LSD, AUG. 21, 1943.
RECORDS AVAILABLE 1940-64, 1966-67, 1969, 1971-72, 1974-75.

DEC.19, 1975 1.750.

****** BARBER COUNTY CONTINUED

370847098552901. 33-15W-11CB. (10) G. H. DAVIS. DRILLED. UNUSED WATER-TABLE WELL IN DEPOSITS OF PERMIAN AGE. DIAMETER 5 INCHES. DEPTH 152 FEET. MEASURING POINT. TOP OF CASING. 0.10 FOOT BELOW LSD. G = MEASURED BY K.S.G.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 102.00 BELOW LSD. DEC. 19. 1975.
LOWEST WATER LEVEL 107.72 BELOW LSD. SEP. 25. 1960.
RECORDS AVAILABLE 1940-64. 1966-67. 1969. 1971-72. 1974-76.

DEC.26. 1976 102.35.

****** BARTON COUNTY

382704098593803. 18-15W-28CCC3. (109A) U.S.G.S. DRILLED. WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 1.25 INCHES. DEPTH 68 FEET. MEASURING POINT. TOP OF PIPE. 4.00 FEET ABOVE LSD. REPLACEMENT FOR 18-15W-28CCC. G = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 1912.50 FEET.
HIGHEST WATER LEVEL 4.86 BELOW LSD. NOV. 20. 1961.
LOWEST WATER LEVEL 17.87 BELOW LSD. SEP. 27. 1976.
RECORDS AVAILABLE 1960-77.

DEC.23. 1976 15.87. MAR.23. 1977 15.45. JUNE14. 1977 12.99. SEP.26. 1977 15.71.

382249098572801. 19-15W-22DDA.(131) F. W. GAGLEMAN. DRILLED. UNUSED. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 5 INCHES. DEPTH 24 FEET. MEASURING POINT. TOP NORTH EDGE OF CASING. 0.30 FOOT ABOVE LSD. G = MEASURED BY K.S.G.A. DESTROYED. JULY 1977.
ALTITUDE OF LAND SURFACE 1917 FEET.
HIGHEST WATER LEVEL 8.05 BELOW LSD. JUNE 25. 1951.
LOWEST WATER LEVEL 19.70 BELOW LSD. SEP. 27. 1976.
RECORDS AVAILABLE 1944-77.

DEC.23. 1976 18.23. MAR.23. 1977 18.11.

****** CHEROKEE COUNTY

371055094401701. 33-25E-9DAD. SPENCER SCHOOL. DRILLED. UNUSED. ARTESIAN OBSERVATION WELL IN THE ROUBIDOUX FORMATION. DEPTH 1016 FEET. DIAMETER 7 INCHES. MEASURING POINT. HOLE IN CASING COVER. 1.2 FEET ABOVE LSD. DISCONTINUED APRIL 1977.
ALTITUDE OF LAND SURFACE 885 FEET.
HIGHEST WATER LEVEL 75.30 BELOW LSD. JUNE 5. 1975.
LOWEST WATER LEVEL 82.07 BELOW LSD. SEP. 11. 1964.
RECORDS AVAILABLE 1964. 1975-76.

DEC. 6. 1976 79.42.

370205094442301. 34-24E-36CDB. CITY OF BAXTER SPRINGS. DRILLED. UNUSED. ARTESIAN OBSERVATION WELL IN THE ROUBIDOUX FORMATION. DEPTH 1016 FEET. DIAMFTER 8 - 6 INCHES. MEASURING POINT. TOP OF RECORDER FLOOR. 3.50 FEET ABOVE LSD. DISCONTINUED JANUARY 1976.
ALTITUDE OF LAND SURFACE 835 FEET.
HIGHEST WATER LEVEL 210.00 BELOW LSD. JAN. . 1926.
LOWEST WATER LEVEL 262.26 BELOW LSD. FEB. 25. 1975.
RECORDS AVAILABLE 1926. 1975.

NOV.10. 1975 215.80.

370514094373901. 34-25E-13BAC. GALENA SMELTER. DRILLED. UNUSED. ARTESIAN OBSERVATION WELL IN THE ROUBIDOUX FORMATION. DEPTH 1150 FEET. DIAMETER 8 - 6 INCHES. MEASURING POINT. TOP OF RECORDER FLOOR. 3.0 FFET ABOVE LSD.
ALTITUDE OF LAND SURFACE 890 FEET.
HIGHEST WATER LEVEL 73.10 BELOW LSD. JULY 10. 1976.
LOWEST WATER LEVEL 88.73 BELOW LSD. JAN. 31. 1977.
RECORDS AVAILABLE 1932. 1975-77.

1976

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
5	......	......	......	......	......	......	......	......	......	......	80.89	81.45
10	......	......	......	......	......	......	......	......	......	......	80.65	81.57
15	......	......	......	......	......	......	......	......	......	......	80.32	81.52
20	......	......	......	......	......	......	......	......	......	......	80.75	81.30
25	......	......	......	......	......	......	......	......	......	......	80.73	81.30
EOM	......	......	......	......	......	......	......	......	......	......	81.11	80.78

1977

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
5	80.03	87.50	85.72	83.05	79.26	79.80	77.12	75.58	78.54	......	......	......
10	79.72	87.10	85.20	83.02	79.35	79.50	77.12	75.90	78.20	......	......	......
15	79.62	87.05	84.87	82.83	79.50	80.18	77.00	76.26	81.37	......	......	......
20	......	86.20	84.05	82.46	79.60	79.85	76.05	76.56	......	......	......	......
25	......	85.40	83.43	81.98	79.12	78.48	75.75	77.01	......	......	......	......
EOM	88.73	85.48	82.35	81.48	79.11	77.54	75.36	77.31	......	......	......	......

****** CHEYENNE COUNTY

394658101312601. 3-37W-19BBC. A. L. KEHLBECK. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 18 INCHES, DEPTH 325 FEET. MEASURING POINT, HOLE IN S.W. SIDE OF PUMP, 0.60 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3468 FEET.
HIGHEST WATER LEVEL 210.64 BELOW LSD, JUNE 8, 1976.
LOWEST WATER LEVEL 242.19 BELOW LSD, JUNE 6, 1972.
RECORDS AVAILABLE 1950, 1965-77.

JAN. 5, 1977 226.99, JUNE 7, 1977 228.66, SEP. 7, 1977 234.18.

394507101433401. 3-39W-32BDB. CLARENCE YONKEY. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 224 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP-HEAD BASE, 0.8 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3490 FEET.
HIGHEST WATER LEVEL 151.99 BELOW LSD, DEC. 4, 1973.
LOWEST WATER LEVEL 178.74 BELOW LSD, JULY 15, 1960.
RECORDS AVAILABLE 1960-77.

JAN. 5, 1977 160.86, JUNE 7, 1977 165.93, SEP. 7, 1977 163.78.

393625101342401. 5-38W-22ACB. (PUBLISHED PREVIOUSLY AS 5-38W-22ACC.) SUSAN GILLILAND. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 18 INCHES, DEPTH 270 FEET. MEASURING POINT, HOLE IN SOUTH SIDE PUMP BASE, 0.20 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3437 FEET.
HIGHEST WATER LEVEL 89.71 BELOW LSD, JAN. 23, 1967.
LOWEST WATER LEVEL 110.46 BELOW LSD, SEP. 16, 1969.
RECORDS AVAILABLE 1964-77.

JAN. 5, 1977 95.88, JUNE 7, 1977 93.36, SEP. 7, 1977 98.78.

393712101470601. 5-40W-14BCD. RALEIGH NICHOL. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 325 FEET, DIAMETER INCHES. MEASURING POINT, HOLE IN PUMP BASE, NORTH SIDE, 0.5 FOOT ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 202.82 BELOW LSD, MAR. 12, 1975.
LOWEST WATER LEVEL 212.29 BELOW LSD, JAN. 5, 1977.
RECORDS AVAILABLE 1975-77.

JAN. 5, 1977 212.29, JUNE 7, 1977 212.00.

393658102003601. 5-42W-14CBC. MELVIN SCHLEPP. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 221 FEET. MEASURING POINT, W.SIDE UPPER EDGE OF SLOPING PIPE, 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3687 FEET.
HIGHEST WATER LEVEL 147.27 BELOW LSD, JAN. 25, 1967.
LOWEST WATER LEVEL 172.82 BELOW LSD, SEP. 14, 1976.
RECORDS AVAILABLE 1964, 1966-77.

JAN. 5, 1977 165.62, JUNE 7, 1977 167.39, SEP. 7, 1977 157.93.

****** CLARK COUNTY

372758099520401. 30-23W-6AAA. ARNOLD HOUFF. DRILLED, WATER-TABLE DOMESTIC AND STOCK WELL IN OGALLALA FORMATION. DIAMETER 6 INCHES, DEPTH 160 FEET. MEASURING POINT, TOP OF CRACK IN PUMP, 1.40 FEET ABOVE LSD. G = MEASURED BY K.S.B.A. MEASURING POINT CHANGED TO 0.7 FOOT ABOVE LSD, APRIL 1963.
ALTITUDE OF LAND SURFACE 2556.7 FEET.
HIGHEST WATER LEVEL 135.90 BELOW LSD, JAN. 17, 1961.
LOWEST WATER LEVEL 143.54 BELOW LSD, DEC. 17, 1974.
RECORDS AVAILABLE 1939, 1952-77.

DEC.20, 1976 140.60, MAR.29, 1977 140.58, JUNE16, 1977 141.44, SEP.29, 1977 140.56.

370822099452801. 33-22W-30CBC. KATHERINE KLINGER. DRILLED, WATER-TABLE IRRIGATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DIAMETER 18 INCHES, DEPTH 168 FEET. MEASURING POINT, FLAP OPENING ON WEST SIDE OF PUMP, 0.71 FOOT ABOVE L.S.D. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 12.09 BELOW LSD, JAN. 9, 1974.
LOWEST WATER LEVEL 29.85 BELOW LSD, APR. 18, 1962.
RECORDS AVAILABLE 1961-77.

MAR.29, 1977 21.18, JUNE16, 1977 25.76, SEP.29, 1977 18.26.

****** CLAY COUNTY

393341097173201. 6-1E-28CD. ARLO AARDAPPEL. DRILLED IRRIGATION WELL IN TERRACE DEPOSITS. DIAMETER 18 INCHES, DEPTH 57 FEET. MEASURING POINT, HOLE IN PUMP BASE, 2.0 FEET ABOVE LSD, G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1259.6 FEET.
HIGHEST WATER LEVEL 2.30 BELOW LSD, DEC. 17, 1973,
LOWEST WATER LEVEL 12.00 BELOW LSD, SEP. 24, 1959.
RECORDS AVAILABLE 1955, 1959-66, 1968-77.

DEC. 8, 1976 8.32, SEP.13, 1977 4.92.

392959097133801. 6-2E-29DAC. LAWRENCE HELLIES ESTATE. DRILLED, ABANDONED IRRIGATION WELL, USED FOR OBSERVATION. DIAMETER 18 INCHES, DEPTH 54 FEET. MEASURING POINT, TOP OF CASING, 0.3 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A. MP CHANGED TO 0.8 FOOT ABOVE LSD, JUNE 10, 1973.
ALTITUDE OF LAND SURFACE 1242.1 FEET.
HIGHEST WATER LEVEL 5.00 BELOW LSD, JUNE 24, 1970,
LOWEST WATER LEVEL 11.21 BELOW LSD, DEC. 8, 1976.
RECORDS AVAILABLE 1955, 1962-63, 1966, 1968-77.

DEC. 8, 1976 11.21, JUNE15, 1977 10.30, SEP.13, 1977 6.65.

392256097105701. 8-2E-2CCA. GLENN V. DITTMAR. DRILLED IRRIGATION WELL IN ALLUVIUM. DIAMETER 18 INCHES, DEPTH 48 FEET. MEASURING POINT, TOP WEST SIDE OF CASING, 0.20 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1193.1 FEET.
HIGHEST WATER LEVEL 9.00 BELOW LSD, MAR. 10, 1961, MAR. 19, 1973,
LOWEST WATER LEVEL 12.76 BELOW LSD, DEC. 8, 1976.
RECORDS AVAILABLE 1954, 1959, 1961, 1968-77.

DEC. 8, 1976 12.76, JUNE15, 1977 12.13, SEP.13, 1977 9.20.

****** CLOUD COUNTY

393907097293701. 5-2W-18AC. MRS. MARY PALMER. DRILLED, WATER-TABLE IRRIGATION WELL IN DAKOTA FORMATION. DIAMETER 20 INCHES, DEPTH 230 FEET. MEASURING POINT, FLAP ON SOUTH SIDE OF PUMP, 0.8 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1380 FEET.
HIGHEST WATER LEVEL 43.92 BELOW LSD, MAR. 18, 1974,
LOWEST WATER LEVEL 71.07 BELOW LSD, SEP. 9, 1976.
RECORDS AVAILABLE 1970-77.

DEC. 8, 1976 46.46, JUNE15, 1977 45.84, SEP.13, 1977 46.70.

****** COMANCHE COUNTY

371958099190101. 31-18W-19ACB(3) E. DEEWALL. DRILLED STOCK WELL IN OGALLALA FORMATION. DIAMETER 6 INCHES, DEPTH 96 FEET, REMEASURED OCT.1961, 89 FEET. MEASURING POINT, TOP NORTH SIDE OF CASING BELOW PUMP BASE, 1.40 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 68.58 BELOW LSD, MAR. 24, 1975,
LOWEST WATER LEVEL 94.07 BELOW LSD, JUNE 8, 1945.
RECORDS AVAILABLE 1940-43, 1945-47, 1953, 1955, 1957-77.

DEC.20, 1976 69.70, MAR.29, 1977 69.06, JUNE16, 1977 70.71, SEP.29, 1977 71.97.

****** DECATUR COUNTY

395708100370701. 1-29W-19BDD. B. E. MCCARTNEY. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM. DIAMETER 18 INCHES, DEPTH 54 FEET. MEASURING POINT, HOLE IN NORTH SIDE OF PUMP-HEAD BASE, 0.70 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2572.5 FEET.
HIGHEST WATER LEVEL 10.07 BELOW LSD, JULY 13, 1960,
LOWEST WATER LEVEL 27.70 BELOW LSD, JULY 15, 1959.
RECORDS AVAILABLE 1959-77.

JAN. 5, 1977 20.75, JUNE 6, 1977 19.83, SEP. 6, 1977 22.45B.

395155100315701. 2-29W-24BCC. (PUBLISHED PREVIOUSLY AS 2-29W-24BCB.) EVERETT SMITH. DRILLED, UNUSED WATER-TABLE WELL IN OGALLALA FORMATION. DIAMETER 5 INCHES, DEPTH 124 FEET. MEASURING POINT, TOP EAST SIDE OF CASING, 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2682.2 FEET.
HIGHEST WATER LEVEL 96.21 BELOW LSD, DEC. 8, 1969,
LOWEST WATER LEVEL 100.37 BELOW LSD, NOV. 22, 1954.
RECORDS AVAILABLE 1954-77.

JAN. 5, 1977 96.59, JUNE 6, 1977 96.69, SEP. 6, 1977 96.32.

****** DECATUR COUNTY CONTINUED

394846100314901. 3-29W-12BBA. WARREN WHITE. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM. DEPTH 60 FEET, DIAMETER 10 INCHES. MEASURING POINT, TOP OF CASING UNDER HOLE IN SOUTHWEST CORNER OF PUMP-HEAD BASE, 0.5 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2556.1 FEET.
HIGHEST WATER LEVEL 20.92 BELOW LSD, JULY 13, 1960.
LOWEST WATER LEVEL 35.19 BELOW LSD, MAR. 4, 1974.
RECORDS AVAILABLE 1959-77.

JAN. 5, 1977 27.04, JUNE 6, 1977 25.63, SEP. 6, 1977 27.78.

394248100150801. 4-26W-8DDD. R. H. HARRIS. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM. DIAMETER 10 INCHES, DEPTH 70 FEET. MEASURING POINT, HOLE IN SOUTHWEST CORNER OF PUMP-HEAD BASE, 1.25 FEET ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2455.7 FEET.
HIGHEST WATER LEVEL 25.70 BELOW LSD, JAN. 21, 1972.
LOWEST WATER LEVEL 37.48 BELOW LSD, SEP. 13, 1976.
RECORDS AVAILABLE 1959-77.

JAN. 5, 1977 31.23, JUNE 6, 1977 29.02, SEP. 6, 1977 28.32.

****** DOUGLAS COUNTY

390144095143801. 12-19E-1DDD. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS OF MEASURING POINT, TOP OF PIPE 3.00 FEET ABOVE LSD.DESTROYED, JULY 1977.
ALTITUDE OF LAND SURFACE 837 FEET.
HIGHEST WATER LEVEL 16.85 BELOW LSD, DEC. 26, 1973.
LOWEST WATER LEVEL 29.20 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1966-76.

DEC. 9, 1976 29.20.

390032095143801. 12-19E-13ADA. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 42 FEET. MEASURING POINT, TOP OF PIPE, 3.00 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 821 FEET.
HIGHEST WATER LEVEL 2.75 BELOW LSD, DEC. 26, 1973.
LOWEST WATER LEVEL 13.03 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1966-77.

DEC. 9, 1976 13.03, JUNE16, 1977 12.96, SEP.19, 1977 8.98.

390105095142901. 12-20E 7CBC. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 29 FEET. MEASURING POINT, TOP OF PIPE, 1.00 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 826 FEET.
HIGHEST WATER LEVEL 5.50 BELOW LSD, DEC. 26, 1973.
LOWEST WATER LEVEL 17.40 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1966-77.

DEC. 9, 1976 17.40, JUNE17, 1977 17.25, SEP.19, 1977 11.64.

390006095132301. 12-20E-17CCB. FRANK D. WALTERS. DRILLED, UNUSED WATER-TABLE WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 10 INCHES. DEPTH 50 FEET. MEASURING POINT, EAST SIDE OF HOLE IN TOP OF BOX 1.50 FEET ABOVE LSD. MEASURING POINT, CHANGED TO 2.50 FEET ABOVE LSD, AUGUST 24, 1977.
ALTITUDE OF LAND SURFACE 831 FEET.
HIGHEST WATER LEVEL 14.39 BELOW LSD, FEB. 5, 1962.
LOWEST WATER LEVEL 26.33 BELOW LSD, MAR. 30, 1957.
RECORDS AVAILABLE 1952-77.

1976

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
5	......	......	......	......	......	......	......	......	......	24.80	24.89	25.06
10	......	......	......	......	......	......	......	......	......	24.82	24.95	25.08
15	......	......	......	......	......	......	......	......	......	24.82	24.97	25.13
20	......	......	......	......	......	......	......	......	......	24.84	25.02	25.15
25	......	......	......	......	......	......	......	......	......	24.85	25.04	25.14
EOM	......	......	......	......	......	......	......	......	......	24.85	25.05	25.13

1977

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
5	25.13	25.27	25.27	25.35	25.32	25.37	23.32	23.50	21.85	......	......	......
10	25.13	25.30	25.28	25.35	25.34	25.47	23.21	23.18	21.69	......	......	......
15	25.13	25.31	25.28	25.30	25.35	25.37	23.14	23.20	20.90	......	......	......
20	25.15	......	25.30	25.36	25.37	24.62	23.18	......	20.68	......	......	......
25	25.16	25.26	25.34	25.31	25.37	23.90	23.45	23.06	20.53	......	......	......
EOM	25.22	25.27	25.37	25.32	25.37	23.46	23.60	23.14	20.48	......	......	......

****** DOUGLAS COUNTY CONTINUED

385653095055901. 13-21E-5DBB. CITY OF EUDORA. DRILLED. UNUSED. WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DEPTH 64 FEET. DIAMETER 12 INCHES. MEASURING POINT. STEEL PLATE ON TOP OF WELL CASING. 7.55 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 818.55 FEET.
HIGHEST WATER LEVEL 18.50 BELOW LSD. OCT. 19. 1973.
LOWEST WATER LEVEL 30.49 BELOW LSD. SEP. 7. 1976.
RECORDS AVAILABLE 1973-77.

DEC. 9. 1976 30.02. JUNE17. 1977 29.65. SEP.19. 1977 24.45.

384501095164901. 15-19E-15AAD. RURAL WATER DISTRICT NO. 5. DRILLED. WATER-TABLE OBSERVATION WELL. DEPTH 190 FEET. DIAMETER 4 INCHES. MEASURING POINT. 2.0 FEET ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 40.87 BELOW LSD. SEP. 15. 1975.
LOWEST WATER LEVEL 51.90 BELOW LSD. JUNE 19. 1973.
RECORDS AVAILABLE 1972-77.

DEC. 6. 1976 46.44. JUNE16. 1977 47.35. SEP.19. 1977 46.50.

****** EDWARDS COUNTY

380145099241301. 23-19W-22CCC. (10) E. F. LIPPOLDT. DUG. UNUSED. WATER-TABLE WELL IN DAKOTA FORMATION. DIAMETER 4.50 FEET. DEPTH 68 FEET. CRIBBED WITH ROCK. MEASURING POINT. TOP OF HOLE IN CONCRETE COVER. 0.60 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.
ALTITUDE OF LAND SURFACE 2238.4 FEET.
HIGHEST WATER LEVEL 60.07 BELOW LSD. OCT. 4. 1977.
LOWEST WATER LEVEL 68.20 BELOW LSD. MAR. 13. 1946.
RECORDS AVAILABLE 1944-77.

DEC.21. 1976 60.17. MAR.30. 1977 60.41. JUNE20. 1977 60.16.

375652099075901. 24-17W-24DDD. KANSAS GEOLOGICAL SURVEY. AUGERED. WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 61 FEET. DIAMETER 1.25 INCHES. MEASURING POINT. TOP OF PIPE. 4.3 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2100 FEET.
HIGHEST WATER LEVEL 13.51 BELOW LSD. DEC. 13. 1973.
LOWEST WATER LEVEL 21.30 BELOW LSD. OCT. 4. 1977.
RECORDS AVAILABLE 1973-77.

DEC.29. 1976 19.56. MAR.30. 1977 20.13. JUNE20. 1977 20.77.

375445099143901. 24-18W-36DDC. GROVER J. MCLEAN. DRILLED. WATER-TABLE IRRIGATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 79 FEET. DIAMETER 16 INCHES. MEASURING POINT. HOLE IN SOUTHEAST CORNER OF PUMP BASE. AT LAND SURFACE.
ALTITUDE OF LAND SURFACE 2149 FEET.
HIGHEST WATER LEVEL 23.60 BELOW LSD. MAR. 21. 1974.
LOWEST WATER LEVEL 30.49 BELOW LSD. OCT. 4. 1977.
RECORDS AVAILABLE 1972-77.

DEC.29. 1976 28.70. MAR.30. 1977 29.13. JUNE20. 1977 29.80.

375513099231701. 24-19W-34ADD. (1A) U.S.G.S. BORED. WATER-TABLE WELL IN ALLUVIUM. DIAMETER 1.25 INCHES. DEPTH 30 FEET. MEASURING POINT. TOP OF PIPE. 2.43 FEET ABOVE LSD. 0 = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 5.99 BELOW LSD. DEC. 21. 1965.
LOWEST WATER LEVEL 10.11 BELOW LSD. SEP. 20. 1976.
RECORDS AVAILABLE 1961-77.

DEC.29. 1976 9.82. MAR.30. 1977 8.31. JUNE15. 1977 9.54.

374940099065101. 25-16W-31DAD. F. B. MAYHEW. DRILLED. UNUSED WELL IN OGALLALA FORMATION. DIAMETER 1.50 INCHES. DEPTH 42 FEET. MEASURING POINT. TOP SOUTH SIDE OF PIPE. 0.80 FOOT ABOVE LSD.
0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2089 FEET.
HIGHEST WATER LEVEL 15.50 BELOW LSD. AUG. 20. 1958.
LOWEST WATER LEVEL 22.08 BELOW LSD. MAR. 27. 1969.
RECORDS AVAILABLE 1957-77.

DEC.21. 1976 17.92. MAR.29. 1977 18.31. JUNE20. 1977 18.72.

****** EDWARDS COUNTY CONTINUED

375346099174801. 25-18W-9AAA. KANSAS GEOLOGICAL SURVEY. DRILLED, UNUSED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 74 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.0 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2161 FEET.
HIGHEST WATER LEVEL 15.61 BELOW LSD, DEC. 14, 1973,
LOWEST WATER LEVEL 22.08 BELOW LSD, OCT. 5, 1977.
RECORDS AVAILABLE 1973-77.

DEC.21, 1976 20.55, MAR.30, 1977 20.77, JUNE20, 1977 21.10.

374931099182901. 25-18W-33CDC. GROVER J. MCLEAN. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 90 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE NORTHWEST CORNER OF PUMP BASE, 0.5 FOOT ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 21.25 BELOW LSD, MAR. 21, 1974,
LOWEST WATER LEVEL 25.14 BELOW LSD, SEP. 26, 1972.
RECORDS AVAILABLE 1972-77.

DEC.21, 1976 23.52, MAR.30, 1977 23.61.

374803099205401. 26-19W-12ABB. PAUL LORENZEN. DRILLED, WATER-TABLE, IRRIGATION WELL IN GRAND ISLAND FORMATION. DEPTH 75 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP OF CASING, 1.00 FOOT ABOVE LSD. S = MEASURED BY K.S.B.A. REPLACED BY 26-19W-12BAA, JULY 1974.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 35.48 BELOW LSD, DEC. 14, 1973,
LOWEST WATER LEVEL 48.15 BELOW LSD, OCT. 5, 1977.
RECORDS AVAILABLE 1966-74, 1976-77.

DEC.21, 1976 45.58, MAR.30, 1977 43.35, JUNE20, 1977 45.48.

374803099210201. 26-19W-12BAA. KANSAS GEOLOGICAL SURVEY. DRILLED, UNUSED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 86 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 2.0 FEET ABOVE LSD. REPLACEMENT WELL FOR 26-19W-12ABB. WELL PLUGGED, DISCONTINUED, SEPTEMBER 1976.
ALTITUDE OF LAND SURFACE 2214 FEET.
HIGHEST WATER LEVEL 37.84 BELOW LSD, JUNE 23, 1975,
LOWEST WATER LEVEL 39.72 BELOW LSD, NOV. 8, 1973.
RECORDS AVAILABLE 1973-76.

JUNE29, 1976 38.73.

****** ELLIS COUNTY

385115099155401. 14-18W-12AAD. ELLIS COUNTY. DRILLED, UNUSED, WATER-TABLE WELL. DIAMETER 1.25 INCHES, DEPTH 54 FEET. MEASURING POINT, TOP OF PIPE, 0.7 FOOT ABOVELSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 25.34 BELOW LSD, AUG. 24, 1976, SEP. 15, 1976,
LOWEST WATER LEVEL 25.69 BELOW LSD, JUNE 8, 1977.
RECORDS AVAILABLE 1976-77.

DEC. 1, 1976 25.48, JUNE 8, 1977 25.69, SEP. 9, 1977 25.67.

385122099161801. 14-18W-12ABB. HERB KOERNER. DRILLED, UNUSED, WATER-TABLE WELL. DIAMETER 2 INCHES, DEPTH 30.0 FEET. MEASURING POINT, TOP OF PIPE, 3.0 FEET ABOVELSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 22.34 BELOW LSD, SEP. 15, 1976,
LOWEST WATER LEVEL 24.93 BELOW LSD, AUG. 24, 1976.
RECORDS AVAILABLE 1976-77.

DEC. 1, 1976 22.55, JUNE 8, 1977 23.04, SEP. 9, 1977 23.60.

****** ELLSWORTH COUNTY

383335098204601. 17-9W-20BCD. ALBERT KRÖSE. DRILLED, WATER-TABLF DOMESTIC AND STOCK WELL. DIAMETER 6 INCHES, DEPTH 63 FEET. MEASURING POINT, STEEL RIM IN CONCRETE BASE, 0.8 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 18.10 BELOW LSD, MAR. 17, 1975,
LOWEST WATER LEVEL 3[illegible].20 BELOW LSD, MAR. 15, 1961.
RECORDS AVAILABLE 1961, 1966-77.

DEC.22, 1976 23.59, MAR.21, 1977 23.70, JUNE17, 1977 25.01, SEP.27, 1977 24.03.

****** ELLSWORTH COUNTY CONTINUED

383334098194701. 17-9W-21BCC. NORTHERN GAS PRODUCTS. DRILLED, WATER-TABLE OBSERVATION WELL IN DAKOTA FORMATION.
DIAMETER 2 INCHES, DEPTH 200 FEET. MEASURING POINT, TOP OF PIPE, 2.40 FEET ABOVE LSD.
G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 82.40 BELOW LSD, MAY 19, 1971.
LOWEST WATER LEVEL 125.35 BELOW LSD, AUG. 25, 1971.
RECORDS AVAILABLE 1966-77.

DEC.22, 1976 98.86, MAR.21, 1977 92.93, JUNE17, 1977 84.59, SEP.21, 1977 93.09.

383334098194702. 17-9W-21BCC2. NORTHERN GAS PRODUCTS. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF
PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 65 FEET. MEASURING POINT, TOP OF PIPE, 2.60 FEET ABOVE LSD
G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 31.74 BELOW LSD, JUNE 23, 1976.
LOWEST WATER LEVEL 37.30 BELOW LSD, OCT. 17, 1968.
RECORDS AVAILABLE 1966-77.

DEC.22, 1976 33.36, MAR.21, 1977 33.94, JUNE17, 1977 34.23, SEP.27, 1977 34.28.

383236098194701. 17-9W-28CBB. NORTHERN GAS PRODUCTS. DRILLED, WATER-TABLE OBSERVATION WELL IN DAKOTA FORMATION.
DIAMETER 2 INCHES, DEPTH 207 FEET. MEASURING POINT, TOP OF PIPE, 2.40 FEET ABOVE LSD.
G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 71.38 BELOW LSD, MAY 19, 1971.
LOWEST WATER LEVEL 123.80 BELOW LSD, SEP. 25, 1968.
RECORDS AVAILABLE 1966-77.

DEC.22, 1976 85.32, MAR.21, 1977 88.88, JUNE17, 1977 79.68, SEP.27, 1977 90.18.

383236098194702. 17-9W-28CBB2. NORTHERN GAS PRODUCTS. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF
PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 77 FEET. MEASURING POINT, TOP OF PIPE, 2.70 FEET ABOVE LSD
G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 34.97 BELOW LSD, SEP. 18, 1975.
LOWEST WATER LEVEL 48.67 BELOW LSD, FEB. 4, 1969, FEB. 27, 1969.
RECORDS AVAILABLE 1966-77.

DEC.22, 1976 36.16, MAR.21, 1977 36.67, JUNE17, 1977 36.95, SEP.27, 1977 36.93.

383210098211001. 17-9W-31AAB. NORTHERN GAS PRODUCTS. DRILLED, WATER-TABLE OBSERVATION WELL IN DAKOTA FORMATION.
DIAMETER 2 INCHES, DEPTH 162 FEET. MEASURING POINT, TOP OF PIPE, 2.70 FEET ABOVE LSD.
G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 74.50 BELOW LSD, MAY 19, 1971.
LOWEST WATER LEVEL 128.57 BELOW LSD, AUG. 28, 1969.
RECORDS AVAILABLE 1966-77.

DEC.22, 1976 98.45, MAR.21, 1977 101.82, JUNE17, 1977 86.86, SEP.27, 1977 100.86.

383210098211002. 17-9W-31AAB2. NORTHERN GAS PRODUCTS. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF
PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 80 FEET. MEASURING POINT, TOP OF PIPE, 2.30 FEET ABOVE LSD
G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 30.04 BELOW LSD, SEP. 27, 1977.
LOWEST WATER LEVEL 41.29 BELOW LSD, JAN. 25, 1971.
RECORDS AVAILABLE 1966-77.

DEC.22, 1976 32.30, MAR.21, 1977 32.57, JUNE17, 1977 31.39, SEP.27, 1977 30.04.

383158098211001. 17-9W-31ADC. HYDROCARBON TRAN.,INC. DRILLED, WATER-TABLE OBSERVATION WELL. DIAMETER 6 INCHES,
DEPTH 245 FEET. MEASURING POINT, TOP OF CASING, 0.6 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 63.20 BELOW LSD, SEP. 22, 1972.
LOWEST WATER LEVEL 121.75 BELOW LSD, AUG. 20, 1969.
RECORDS AVAILABLE 1966-77.

DEC.22, 1976 90.25, MAR.21, 1977 94.83, JUNE17, 1977 76.25, SEP.27, 1977 93.72.

****** FINNEY COUNTY

381242100514201. 21-32W-20CBD. L. ARCHER. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 203 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP BASE, 0.30 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2897.70 FEET.
HIGHEST WATER LEVEL 44.22 BELOW LSD, MAR. 15, 1965.
LOWEST WATER LEVEL 88.20 BELOW LSD, SEP. 22, 1976.
RECORDS AVAILABLE 1964-77.

DEC.30, 1976 73.10, SEP.21, 1977 83.61.

381340101010701. 21-34W-14DBB. PAT MCHUGH. DRILLED, WATER-TABLE IRRIGATION WELL IN NIOBRARA CHALK, DEPTH 141 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE INNORTH SIDE OF PUMP BASE, 0.90 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2947.1 FEET.
HIGHEST WATER LEVEL 63.58 BELOW LSD, SEP. 29, 1964.
LOWEST WATER LEVEL 109.46 BELOW LSD, SEP. 21, 1977.
RECORDS AVAILABLE 1961-77.

JAN. 3, 1977 104.85, SEP.21, 1977 109.46.

380823100144801. 22-27W-14ADC. LOUIS OMEY. DRILLED, WATER-TABLE IRRIGATION WELL IN DAKOTA FORMATION. DEPTH 395 FEET, DIAMETER 16 INCHES. MEASURING POINT, PLUG IN NORTHEAST CORNER OF PUMP BASE, 0.5 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2458 FEET.
HIGHEST WATER LEVEL 137.08 BELOW LSD, MAR. 11, 1971.
LOWEST WATER LEVEL 201.25 BELOW LSD, SEP. 16, 1971.
RECORDS AVAILABLE 1970-77.

JAN.14, 1977 176.86, MAR. 3, 1977 173.90, JUNE 6, 1977 179.36, SEP.14, 1977 188.48.

380801100554801. 22-33W-22BAA. O. TRENT. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 184 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 0.1 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2900.0 FEET.
HIGHEST WATER LEVEL 37.03 BELOW LSD, FEB. 1, 1962.
LOWEST WATER LEVEL 93.10 BELOW LSD, SEP. 18, 1974.
RECORDS AVAILABLE 1960, 1962-63, 1965-77.

DEC.30, 1976 79.90, MAR.16, 1977 74.98B, JUNE14, 1977 84.83.

380616100530402. 22-33W-36AAA2. GEORGE M. HAHN. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 190 FEET, DIAMETER 16 INCHES. MEASURING POINT, 1-INCH HOLE IN STEEL CAP, TOP OF CASING, 3.5 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2860 FEET.
HIGHEST WATER LEVEL 18.46 BELOW LSD, MAR. 18, 1964.
LOWEST WATER LEVEL 85.75 BELOW LSD, AUG. 18, 1965.
RECORDS AVAILABLE 1958, 1963-77.

DEC.28, 1976 62.37C, MAR.16, 1977 58.02C, JUNE14, 1977 59.54, SEP.27, 1977 71.19.

380648101004301. 22-34W-26ADD TRINKLE ESTATE. DRILLED, UNUSED DOMESTIC AND STOCK WELL IN DEPOSITS OF PLIOCENE AND PLEISTOCENE AGE. DIAMETER 5 INCHES, DEPTH 163 FEET. MEASURING POINT, TOP EDGE OF 3 X 3-INCH WOOD CLAMP, 0.90 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2928 FEET.
HIGHEST WATER LEVEL 49.43 BELOW LSD, MAR. 31, 1959.
LOWEST WATER LEVEL 131.30 BELOW LSD, JUNE 22, 1977.
RECORDS AVAILABLE 1957-77.

DEC.30, 1976 126.80, MAR.16, 1977 126.07, JUNE22, 1977 131.30, SEP.21, 1977 130.93.

380333100143301. 23-27W-12CCC. C. R. RIXON, DRILLED, UNUSED OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 72 FEET, DIAMETER 6 INCHES. MEASURING POINT, 1-INCH BOARD ON TOP OF CONCRETE BLOCK, 0.6 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2617.9 FEET.
HIGHEST WATER LEVEL 61.74 BELOW LSD, JAN. 21, 1974.
LOWEST WATER LEVEL 68.49 BELOW LSD, OCT. 2, 1941.
RECORDS AVAILABLE 1939-42, 1952-77.

JAN. 4, 1977 61.88, MAR. 3, 1977 63.05, JUNE 6, 1977 62.30, SEP.14, 1977 62.32.

****** FINNEY COUNTY CONTINUED

380339100502401. 23-33W-17BBB. GARDEN CITY CO. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 340 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN EAST SIDE OF PUMP BASE, 1.3 FEET ABOVE LSD. G = MEASURED BY U.S.B.R.
ALTITUDE OF LAND SURFACE 2903.9 FEET.
HIGHEST WATER LEVEL 40.00 BELOW LSD, APR. 28, 1958.
LOWEST WATER LEVEL 141.48 BELOW LSD, DEC. 28, 1976.
RECORDS AVAILABLE 1958, 1961-76.

DEC.28, 1976 141.48.

380109100570201. 23-33W-28CDC. ANDREW BURGHARDT. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 300 FEET. MEASURING POINT, TOP OF CONCRETE BASE NORTH SIDE, 1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2903.3 FEET.
HIGHEST WATER LEVEL 50.20 BELOW LSD, APR. , 1958.
LOWEST WATER LEVEL 155.81 BELOW LSD, SEP. 27, 1977.
RECORDS AVAILABLE 1958, 1966-77.

DEC.29, 1976 122.27, MAR.16, 1977 115.55, JUNE22, 1977 117.45, SEP.27, 1977 155.818.

380201101030101. 23-34W-21DDC. P. W. TURRENTINE. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 300 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP OF CONCRETE, 0.3 FOOT ABOVE LSD. MEASURED BY K.S.B.A. THIS WELL IS A CONTINUOUS RECORDER, HOWEVFR ONLY A MONTHLY MEASUREMENT IS IN THIS FILE. BOARD OF AGRICULTURE HAS COMPLETE RECORD.
ALTITUDE OF LAND SURFACE 2960.6 FEET.
HIGHEST WATER LEVEL 51.30 BELOW LSD, MAY 13, 1958.
LOWEST WATER LEVEL 157.43 BELOW LSD, AUG. 5, 1977.
RECORDS AVAILABLE 1958, 1965-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1976	144.42	JAN. 5, 1977	125.30	APR. 5, 1977	152.30	JULY 5, 1977	155.97
NOV. 5	133.84	FEB. 5	122.13	MAY 5	140.85	AUG. 5	157.43
DEC. 31	129.70	MAR. 5	133.69	JUNE 5	124.23	SEP. 5	151.68

375558100430401. 24-31W-27CCB. (1002) CITY OF GARDEN CITY. DRILLED, WATER-TABLE INDUSTRIAL WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 295 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP WEST SIDE OF CASING, 0.80 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2883.2 FEET.
HIGHEST WATER LEVEL 110.26 BELOW LSD, NOV. 9, 1953.
LOWEST WATER LEVEL 135.80 BELOW LSD, JULY 2, 1943.
RECORDS AVAILABLE 1942-77.

JUNE 6, 1977 125.22, SEP.14, 1977 127.17.

375936100484901. 24-32W-3DAC. (26) GARDEN CITY EXPERIMENT STATION. DRILLED, UNUSED, WATER-TABLE WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 105 FEET, DIAMETER 26 INCHES. MEASURING POINT, TOP OF CASING, AT LAND SURFACE. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2880.9 FEET.
HIGHEST WATER LEVEL 63.85 BELOW LSD, OCT. 29, 1951.
LOWEST WATER LEVEL 98.46 BELOW LSD, SEP. 14, 1977.
RECORDS AVAILABLE 1934, 1939-77.

DEC.30, 1976 94.34, MAR. 3, 1977 94.18, JUNE 6, 1977 95.61, SEP.14, 1977 98.46.

375918100562102. 24-33W-9AAA2. H. M. WILEY. REPLACEMENT FOR 24-33W-9AA(1). DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 5 INCHES, DEPTH 34 FEET. MEASURING POINT SINCE 8/26/66, TOP OF PIPE, 2.60 FEET ABOVE LSD. THIS WELL IS A CONTINUOUS RECORDER, HOWEVER, ONLY A MONTHLY MEASUREMENT IS IN THIS FILE. BOARD OF AGRICULTURE HAS A COMPLETE RECORD. DISCONTINUED APRIL 1977.
ALTITUDE OF LAND SURFACE 2862.00 FEET.
HIGHEST WATER LEVEL 16.31 BELOW LSD, APR. 30, 1970.
DRY, WATER LEVEL NOT MEASUREABLE, JUNE 1, 1975, JULY 1, 1975, AUG. 1, 1975, SEP. 1, 1975, OCT. 1, 1975, NOV. 1, 1975, DEC. 1, 1975, JAN. 5, 1976, FEB. 5, 1976, MAR. 5, 1976, APR. 5, 1976, MAY 5, 1976, JUNE 5, 1976, JULY 5, 1976, AUG. 5, 1976, SEP. 5, 1976, JAN. 5, 1977, FEB. 5, 1977, MAR. 5, 1977, APR. 5, 1977.
RECORDS AVAILABLE 1966-77.

JAN. 5, 1977 F , FEB. 5, 1977 F , MAR. 5, 1977 F , APR. 5, 1977 F .

****** FINNEY COUNTY CONTINUED

375832100571801. 24-33W-9CCD. KGS - USGS. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLIOCENE AND PLEISTOCENE AGE. DEPTH 210 FEET, DIAMETER 5 INCHES. MEASURING POINT, TOP OF CASING, 1.5 FEET ABOVE LSD. MEASURED BY K.S.B.A. THIS WELL HAS A CONTINUOUS RECORDER, ONLY A MONTHLY RECORD IS IN THIS FILE K.S.B.A. HAS COMPLETE RECORD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 83.33 BELOW LSD, JULY 22, 1977,
LOWEST WATER LEVEL 110.18 BELOW LSD, JULY 14, 1977.
RECORDS AVAILABLE 1977.

JULY14, 1977 110.18, JULY22, 1977 83.33, SEP.22, 1977 84.33.

375832100571802. 24-33W-9CCD2. KGS - USGS. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DEPTH 55 FEET, DIAMETER 5 INCHES. MEASURING POINT, TOP OF CASING, 1.25 FEET ABOVE LSD. MEASURED BY K.S.B.A. THIS WELL HAS A CONTINUOUS RECORDER. ONLY A MONTHLY RECORD IS IN THIS FILE. K.S.B.A. HAS COMPLETE FILE.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 29.22 BELOW LSD, JULY 15, 1977,
LOWEST WATER LEVEL 30.53 BELOW LSD, JULY 22, 1977, SEP. 22, 1977.
RECORDS AVAILABLE 1977.

JULY15, 1977 29.22, JULY22, 1977 30.53, SEP.22, 1977 30.53.

375654100553201. 24-33W-22DCA. GIGOT WELL NO. 21. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 373 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE INSIDE PUMP BASE, NORTH SIDE, 1.0 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2915 FEET.
HIGHEST WATER LEVEL 75.80 BELOW LSD, FEB. 22, 1973,
LOWEST WATER LEVEL 109.53 BELOW LSD, SEP. 13, 1977.
RECORDS AVAILABLE 1973-77.

FEB. 7, 1977 90.84, MAR.16, 1977 99.50, JUNE 9, 1977 102.88, SEP.13, 1977 109.53.

375614100562101. 24-33W-28DAA. GIGOT WELL NO. 41. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 350 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE INSIDE PUMP, NORTHEAST SIDE, 0.6 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2886 FEET.
HIGHEST WATER LEVEL 68.37 BELOW LSD, MAR. 7, 1974,
LOWEST WATER LEVEL 97.72 BELOW LSD, SEP. 13, 1977.
RECORDS AVAILABLE 1973-77.

FEB. 8, 1977 76.87, MAR.16, 1977 78.62, SEP.13, 1977 97.72.

374951100520201. 25-32W-31DD. HARRY LIGHTNER. DRILLED, ARTESIAN IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 140 FEET, DIAMETER 20 INCHES. MEASURING POINT, LOWER EAST EDGE OF SLOPING PIPE, 1.12 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2880.16 FEET.
HIGHEST WATER LEVEL 61.86 BELOW LSD, JAN. 25, 1966,
LOWEST WATER LEVEL 88.12 BELOW LSD, SEP. 23, 1976.
RECORDS AVAILABLE 1958-77.

FEB. 3, 1977 83.51, JUNE16, 1977 86.83.

375449100574301. 25-33W-5ABD. GIGOT WELL NO. 56. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATIO PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 420 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTHEAST SIDE, 0.5 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2920 FEET.
HIGHEST WATER LEVEL 78.16 BELOW LSD, MAR. 7, 1974,
LOWEST WATER LEVEL 104.11 BELOW LSD, SEP. 13, 1977.
RECORDS AVAILABLE 1973-77.

FEB.15, 1977 87.84, MAR.16, 1977 87.21, JUNE 9, 1977 89.11, SEP.13, 1977 104.11.

375357100563701. 25-33W-9ABD. GIGOT WELL NO. 31. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 400 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP BASE, NORTHEAST SIDE, 0.3 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2909 FEET.
HIGHEST WATER LEVEL 76.63 BELOW LSD, MAR. 7, 1974,
LOWEST WATER LEVEL 112.29 BELOW LSD, SEP. 13, 1977.
RECORDS AVAILABLE 1973-77.

FEB. 7, 1977 91.25, MAR.16, 1977 91.67, JUNE 9, 1977 90.17, SEP.13, 1977 112.29.

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******   FINNEY COUNTY            CONTINUED

375239100552401.     25-33W-15DAC. GIGOT WELL NO. 1. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEIS-
                 TOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH      FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN
                 PUMP BASE, NORTHEAST SIDE, 0.26 FOOT ABOVE LSD.
                 NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
                 HIGHEST WATER LEVEL   93.04 BELOW LSD, FEB. 27, 1972,
                 LOWEST WATER LEVEL  142.34 BELOW LSD, SEP. 11, 1974.
                 RECORDS AVAILABLE 1972-77.

                 FEB. 7, 1977   109.64, JUNE 9, 1977   110.67.


375239100574301.     25-33W-17DBD. GIGOT WELL NO. 51. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED
                 PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 473 FEET, DIAMETER 16 INCHES. MEASURING POINT,
                 HOLE INSIDE PUMP BASE, NORTHWEST SIDE, 0.5 FOOT ABOVE LSD.
                 ALTITUDE OF LAND SURFACE 2970    FEET.
                 HIGHEST WATER LEVEL  100.04 BELOW LSD, DEC. 13, 1973,
                 LOWEST WATER LEVEL  122.58 BELOW LSD, SEP. 13, 1977.
                 RECORDS AVAILABLE 1973-77.

                 FEB. 7, 1977   107.29, MAR.16, 1977   109.39, JUNE 9, 1977   109.66, SEP.13, 1977   122.58.


375002100542601.     25-33W-35DBD. OLIVER W. DRUSSEL. DRILLED, WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED
                 PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 340 FEET, DIAMETER 16 INCHES. MEASURING POINT
                 TOP OF CASING, INSIDE GAGE HOUSE, AT LAND SURFACE.
                 ALTITUDE OF LAND SURFACE 2894    FEET.
                 HIGHEST WATER LEVEL   74.32 BELOW LSD, MAR.  1, 1974,
                 LOWEST WATER LEVEL  131.50 BELOW LSD, JULY  1, 1974.
                 RECORDS AVAILABLE 1974-77.

                 FEB. 2, 1977    83.03, MAR.16, 1977    84.39, JUNE27, 1977    93.12, SEP.27, 1977    89.73.


375496101050301.     25-34W-6AAA. DEAN GIGOT. DRILLED, WATER-TABLE OBSERVATION WELL. DEPTH 300 FEET, DIAMETER 2 IN-
                 CHES. MEASURING POINT, TOP OF PIPE, 1.24 FEET ABOVE LSD.
                 NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
                 HIGHEST WATER LEVEL   67.26 BELOW LSD, APR.   , 1975,
                 LOWEST WATER LEVEL   86.89 BELOW LSD, SEP. 21, 1977.
                 RECORDS AVAILABLE 1975-77.

                 FEB.15, 1977    77.79, MAR.14, 1977    77.25, JUNE 9, 1977    77.06, SEP.21, 1977    86.89.


375404101021201.     25-34W-10ABB. DEAN GIGOT. DRILLED, WATER-TABLE OBSERVATION WELL. DEPTH 300 FEET, DIAMETER 2 IN-
                 CHES. MEASURING POINT, TOP OF PIPE, 1.85 FEET ABOVE LSD. CHANGED LOCATION TO 25-34W-10ABB, APRIL
                 1977.
                 ALTITUDE OF LAND SURFACE 2960    FEET.
                 HIGHEST WATER LEVEL   68.15 BELOW LSD, APR.   , 1975,
                 LOWEST WATER LEVEL   77.43 BELOW LSD, SEP. 21, 1977.
                 RECORDS AVAILABLE 1975-77.

                 FEB. 3, 1977    74.82, MAR.14, 1977    75.53, JUNE 9, 1977    74.88, SEP.21, 1977    77.43.


375002101020401.     25-34W-34DBD. H. BROWNLEE. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE
                 DEPOSITS AND OGALLALA FORMATION. DEPTH      FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN WEST
                 SIDE OF PUMP BASE, 1.0 FOOT ABOVE LSD.
                 ALTITUDE OF LAND SURFACE 2945    FEET.
                 HIGHEST WATER LEVEL   73.77 BELOW LSD, JAN. 22, 1970,
                 LOWEST WATER LEVEL   86.87 BELOW LSD, SEP. 23, 1976.
                 RECORDS AVAILABLE 1970-77.

                 FEB.15, 1977    83.28, MAR.16, 1977    83.14.


374553100534701.     26-33W-26ABB. C. J. VOTH. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE
                 DEPOSITS AND OGALLALA FORMATION. DEPTH 340 FEET, DIAMETER 16 INCHES. MEASURING POINT, EDGE OF CUT-
                 OUT ON SOUTH SIDE, 1.3 FEET ABOVE LSD.
                 ALTITUDE OF LAND SURFACE 2929    FEET.
                 HIGHEST WATER LEVEL  115.53 BELOW LSD, FEB.  1, 1961,
                 LOWEST WATER LEVEL  139.65 BELOW LSD, SEP. 20, 1977.
                 RECORDS AVAILABLE 1961-77.

                 FEB.15, 1977   135.60, MAR.16, 1977   134.65, JUNE14, 1977   135.48, SEP.20, 1977   139.65.
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****** FORD COUNTY

375206099451001. 25-22W-20AAA. MARY ARENDS. DRILLED CEMETERY WELL IN OGALLALA FORMATION. DIAMETER 5.50 INCHES, DEPTH 72 FEET. MEASURING POINT, HOLE IN PUMP BASE UNDER PUMP HANDLE, 0.20 ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2437.9 FEET.
HIGHEST WATER LEVEL 61.73 BELOW LSD, JUNE 15, 1977,
LOWEST WATER LEVEL 67.75 BELOW LSD, OCT. 18, 1953.
RECORDS AVAILABLE 1939, 1951-77.

DEC.28, 1976 62.13, MAR.25, 1977 62.05, JUNE15, 1977 61.73.

375028099434701. 25-22W-27CCD. JAMES NIETLING. DRILLED, WATER-TABLE OBSERVATION WELL IN DAKOTA SANDSTONE FORMATION. DEPTH 240 FEET. MEASURING POINT, 6-INCH HOLE EAST SIDE OF CONCRETE TOP OF WELL PIT, 0.6 FEET ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 116.67 BELOW LSD, MAR. 26, 1975,
LOWEST WATER LEVEL 147.70 BELOW LSD, NOV. 24, 1970.
RECORDS AVAILABLE 1970-77.

DEC.28, 1976 136.86, MAR.30, 1977 134.17, JUNE15, 1977 134.11.

375307099492701. 25-23W-11CCC. K.S.B.A. DRILLED, WATER-TABLE OBSERVATION WELL IN THE DAKOTA FORMATION. DEPTH 385 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 2.3 FEET ABOVE LSD. THIS WELL IS A CONTINUOUS RECORDER, HOWEVER, ONLY A MONTHLY MEASURFMENT IS IN THIS FILE. BOARD OF AGRICULTURE HAS COMPLETE RECORD.
ALTITUDE OF LAND SURFACE 2423.0 FEET.
HIGHEST WATER LEVEL 71.96 BELOW LSD, MAY 15, 1973,
LOWEST WATER LEVEL 120.08 BELOW LSD, AUG. 5, 1977.
RECORDS AVAILABLE 1968-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1976	107.92	JAN. 5, 1977	113.63	APR. 5, 1977	116.41	JULY 5, 1977	119.21
NOV. 5	109.29	FEB. 5	114.91	MAY 5	117.46	AUG. 5	120.08
DEC. 5	111.18	MAR. 5	115.18	JUNE 5	118.45		

375353099482001. 25-23W-12BBB. ANTHONY INDIEK. DRILLED, ARTESIAN OBSERVATION WELL IN DAKOTA FORMATION. DEPTH 362 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, HOLE IN TOP OF CASING, 4.2 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2390 FEET.
HIGHEST WATER LEVEL 116.70 BELOW LSD, MAY 23, 1973,
LOWEST WATER LEVEL 166.04 BELOW LSD, SEP. 22, 1976.
RECORDS AVAILABLE 1972-77.

DEC.28, 1976 156.41, MAR.25, 1977 153.04, JUNE20, 1977 150.09.

375241099482901. 25-23W-14ADD. TOM GLEASON. DRILLED, WATER-TABLE DOMESTIC AND STOCK WELL IN DAKOTA SANDSTONE FORMATION. DEPTH 263 FEET, DIAMETER 5 INCHES. MEASURING POINT, HOLE IN BASE OF PUMP NORTH SIDE, 1.0 FOOT ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 156.40 BELOW LSD, APR. 11, 1969,
LOWEST WATER LEVEL 224.53 BELOW LSD, SEP. 22, 1975.
RECORDS AVAILABLE 1969-77.

DEC.29, 1976 210.81, MAR.25, 1977 209.86, JUNE20, 1977 203.80.

374637099381001. 26-21W-17DBC. LARRY STRONG. DRILLED, WATER-TABLE OBSERVATION WELL. DEPTH FEET, DIAMETER INCHES. MEASURING POINT, NORTH EDGE OF CASING, 0.6 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2348 FEET.
HIGHEST WATER LEVEL 48.52 BELOW LSD, MAY 23, 1973,
LOWEST WATER LEVEL 73.65 BELOW LSD, SEP. 22, 1976.
RECORDS AVAILABLE 1973-77.

DEC.21, 1976 60.13, MAR.28, 1977 57.46, JUNE15, 1977 57.59, SEP.30, 1977 63.64.

374559099343801. 26-21W-23ADA. (96A) HENRY HATRUP. DRIVEN, UNUSED WELL IN ALLUVIUM. DIAMETER 1.25 INCHES, DEPTH 12 FEET. MEASURING POINT, TOP OF PIPE, 0.60 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. THIS WELL REPLACED A FILLED IN IRRIGATION WELL ON 1-16-56. DEPTH OF ORIGINAL WELL 29 FEET, M.P. 0.80 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2262.4 FEET.
HIGHEST WATER LEVEL 2.40 BELOW LSD, MAR. 27, 1973,
LOWEST WATER LEVEL 11.02 BELOW LSD, SEP. 5, 1939.
RECORDS AVAILABLE 1938-54, 1956-77.

DEC.21, 1976 7.93, MAR.18, 1977 7.87, JUNE15, 1977 8.08, SEP.30, 1977 7.69.

****** FORD COUNTY CONTINUED

374725099485601. 26-23W-10DAD. JAMES A. MCGUIN. DRILLED, UNUSED ARTESIAN IRRIGATION WELL IN DAKOTA FORMATION. DEPTH 280 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP WEST SIDE OF 16-INCH CASING, 0.8 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2463.3 FEET.
HIGHEST WATER LEVEL 123.19 BELOW LSD, APR. 11, 1969,
LOWEST WATER LEVEL 180.30 BELOW LSD, AUG. 28, 1973.
RECORDS AVAILABLE 1968-77.

DEC.28, 1976 173.13, MAR.30, 1977 173.31, JUNE15, 1977 172.22.

374442099573601. 26-24W-29DDD. U. S. GEOL. SURVEY, DRILLED, UNUSED WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 209 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.9 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2575 FEET.
HIGHEST WATER LEVEL 130.74 BELOW LSD, NOV. 26, 1973,
LOWEST WATER LEVEL 150.40 BELOW LSD, JULY 22, 1971.
RECORDS AVAILABLE 1968-77.

DEC.21, 1976 140.64, MAR.18, 1977 148.04, JUNE15, 1977 147.82, SEP.30, 1977 137.57.

374356099584201. 26-24W-31DDA. DEAN WILSON. DRILLED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 112 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 4.3 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2463.3 FEET.
HIGHEST WATER LEVEL 10.62 BELOW LSD, FEB. 21, 1973,
LOWEST WATER LEVEL 32.76 BELOW LSD, JUNE 15, 1977.
RECORDS AVAILABLE 1968-77.

DEC.21, 1976 15.19, MAR.25, 1977 21.22, JUNE15, 1977 32.76, SEP.30, 1977 17.32.

374409099582501. 26-24W-32CBA. FARMLAND INDUSTRIES, INC. DRILLED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 136 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 1.0 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2468.9 FEET.
HIGHEST WATER LEVEL 4.30 BELOW LSD, JULY 7, 1967,
LOWEST WATER LEVEL 48.33 BELOW LSD, JUNE 15, 1977.
RECORDS AVAILABLE 1962, 1967-77.

DEC.21, 1976 23.22, MAR.25, 1977 30.04, JUNE15, 1977 48.33, SEP.30, 1977 24.90.

374356099573601. 26-24W-32DDA. RICHARD GRIBBLE. DRILLED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 104 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.6 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2464 FEET.
HIGHEST WATER LEVEL 18.65 BELOW LSD, FEB. 22, 1973,
LOWEST WATER LEVEL 47.00 BELOW LSD, JULY 18, 1969.
RECORDS AVAILABLE 1938, 1968-77.

DEC.21, 1976 27.21, MAR.25, 1977 34.39, JUNE15, 1977 32.65, SEP.30, 1977 37.93.

374357099578301. 26-24W-33CDA. WINTER INVESTMENTS INC. DRILLED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 126 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.0 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2466 FEET.
HIGHEST WATER LEVEL 26.67 BELOW LSD, APR. 27, 1973,
LOWEST WATER LEVEL 55.74 BELOW LSD, JULY 18, 1969.
RECORDS AVAILABLE 1968-77.

DEC.21, 1976 32.73, JUNE15, 1977 49.13, SEP.30, 1977 35.17.

374445100025501. 26-25W-34BBB. (B) F. H. DIEHL. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM. DIAMETER 20 INCHES, DEPTH 28 FEET. MEASURING POINT, TOP OF CASING, 0.80 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. J = AFFECTED BY FLOOD WATERS.
ALTITUDE OF LAND SURFACE 2490.2 FEET.
HIGHEST WATER LEVEL 0.86 BELOW LSD, MAY 13, 1942,
LOWEST WATER LEVEL 11.98 BELOW LSD, OCT. 4, 1977.
RECORDS AVAILABLE 1938-77.

DEC.21, 1976 11.33, MAR.25, 1977 11.18, JUNE15, 1977 10.90.

****** FORD COUNTY CONTINUED

374741100070001. 26-26W-12CDB, (1002) WILLIAM C. KNOY. DRILLED, WATER-TABLE STOCK AND IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 261 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP EAST SIDE OF PUMP BASE, 1.09 FEET ABOVE LSD. 6 = MEASURED BY K.S.B.A. DISCONTINUED SEPTEMBER 1977.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 98.10 BELOW LSD, JAN. 22, 1951.
LOWEST WATER LEVEL 104.00 BELOW LSD, NOV. 20, 1942.
RECORDS AVAILABLE 1942-76.

SEP.28, 1976 114.34.

374403100110601. 26-26W-32DCC. IRSIK AND DOLL. DRILLED, WATER-TABLE OBSERVATION AND STOCK WELL. DEPTH 124 FEET. DIAMETER 4 INCHES. MEASURING POINT, TOP OF CASING, 1.0 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 72.08 BELOW LSD, APR. 1, 1977.
LOWEST WATER LEVEL 75.21 BELOW LSD, OCT. 4, 1977.
RECORDS AVAILABLE 1977.

APR. 1, 1977 72.08, JUNE15, 1977 72.39.

374048099474001. 27-23W-24BCB. DUANE REIDLE. DRILLED, WATER-TABLE IRRIGATION WELL IN THE DAKOTA FORMATION. DEPTH 220 FEET, DIAMETER 16 INCHES. MEASURING POINT, BACK BASE OF PUMP, NORTHWEST SIDE, 0.4 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2395 FEET.
HIGHEST WATER LEVEL 1.40 BELOW LSD, MAR. 21, 1974.
LOWEST WATER LEVEL 57.60 BELOW LSD, SEP. 23, 1975.
RECORDS AVAILABLE 1974-77.

DEC.21, 1976 27.23, MAR.18, 1977 12.60, JUNE15, 1977 31.52, SEP.30, 1977 36.02.

374337099561401. 27-24W-3BBD. STATE OF KANSAS. DRILLED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 95 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF CASING, 2.3 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2455.2 FEET.
HIGHEST WATER LEVEL 17.25 BELOW LSD, APR. 27, 1973.
LOWEST WATER LEVEL 43.02 BELOW LSD, AUG. 28, 1973.
RECORDS AVAILABLE 1968-77.

DEC.21, 1976 26.06, MAR.25, 1977 25.06, JUNE15, 1977 26.16, SEP.30, 1977 35.59.

374258099555701. 27-24W-3CDD. MARILYN RING. DRILLED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 96 FEET, DIAMETER 4 INCHES. MEASURING POINT, TOP OF CASING, 0.4 FOOT ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 6.06 BELOW LSD, APR. 25, 1975.
LOWEST WATER LEVEL 43.95 BELOW LSD, JULY 25, 1977.
RECORDS AVAILABLE 1973-77.

1976

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
5	......	......	......	......	......	......	......	......	......	14.85	17.33	......
10	......	......	......	......	......	......	......	......	......	13.39	14.80	......
15	......	......	......	......	......	......	......	......	......	14.09	15.22	......
20	......	......	......	......	......	......	......	......	......	13.08	17.77	......
25	......	......	......	......	......	......	......	......	......	13.90	......	13.50
EOM	......	......	......	......	......	......	......	......	......	15.00	......	12.12

1977

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
5	11.80	11.26	15.42	13.27	......	......	......	......	......	......	......	......
10	11.61	11.75	17.13	10.66	......	......	......	......	......	......	......	......
15	11.35	12.28	14.73	20.52	......	24.60	......	......	......	......	......	......
20	......	13.37	16.90	17.75	......	21.94	......	......	......	......	......	......
25	11.96	12.63	19.08	......	12.79	......	43.95	......	......	......	......	......
EOM	11.59	12.28	16.78	......	13.77	......	......	......	......	......	......	......

374337099572001. 27-24W-4BBC. SAMUEL H. CAUGHRON. DRILLED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 119 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.8 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2403.0 FEET.
HIGHEST WATER LEVEL 11.24 BELOW LSD, DEC. 13, 1974.
LOWEST WATER LEVEL 39.30 BELOW LSD, JUNE 15, 1977.
RECORDS AVAILABLE 1968-77.

MAR.25, 1977 34.49, JUNE15, 1977 39.30, SEP.30, 1977 19.23.

374245099562001. 27-24W-9AAD. RENICK + DOLL CATTLE COMPANY. DRILLED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 160 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF CASING, 3.1 FEET ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 16.60 BELOW LSD, APR. 27, 1973.
LOWEST WATER LEVEL 51.07 BELOW LSD, JULY 22, 1977.
RECORDS AVAILABLE 1972-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 25, 1977	10.08	APR. 18, 1977	28.15	JUNE 15, 1977	22.90	AUG. 26, 1977	32.37
MAR. 18	22.80	MAY 23	26.90	JULY 22	51.07	SEP. 30	29.18

****** FORD COUNTY CONTINUED

374146099570301. 27-24W-16BDA. WAYNE R. BARNES. DRILLED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 170 FEET, DIAMETER 1-1/4 INCHES. MEASURING POINT, TOP OF PIPE, 3.4 FEET ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 74.93 BELOW LSD, MAR. 26, 1975,
LOWEST WATER LEVEL 126.16 BELOW LSD, JULY 22, 1977.
RECORDS AVAILABLE 1973-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 25, 1977	78.15	APR. 13, 1977	96.40	JUNE 15, 1977	95.16	AUG. 24, 1977	90.60
MAR. 10	84.17	MAY 23	79.00	JULY 22	126.16	SEP. 30	85.57

373652099575901. 28-24W-8DCC. T. W. BELL. DRILLED, WATFR-TABLE IRRIGATION WELL. DEPTH FEET, DIAMETER INCHES. MEASURING POINT, 1.25-INCH PLUG IN SOUTHWEST CORNER OF PUMP BASE, 0.60 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 132.16 BELOW LSD, JUNE 15, 1977,
LOWEST WATER LEVEL 134.22 BELOW LSD, SEP. 22, 1977.
RECORDS AVAILABLE 1977.

MAY 3, 1977 132.84, JUNE15, 1977 132.16, SEP.22, 1977 134.22.

373038100053901. 28-25W-6ABB. CHAS. W. SWITZER. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 180 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE SOUTHWEST CORNER OF PUMP BASE, 0.2 FOOT ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 138.31 BELOW LSD, MAR. 24, 1972,
LOWEST WATER LEVEL 144.72 BELOW LSD, DEC. 30, 1974.
RECORDS AVAILABLE 1972-77.

DEC.21, 1976 141.75, JUNE15, 1977 141.93, SEP.22, 1977 144.36.

373638100065401. 28-26W-13BDD. CARL ZINK. DRILLED, WATFR-TABLE IRRIGATION WELL. DEPTH 225 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTHWEST CORNER OF PUMP BASE, 0.5 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 127.26 BELOW LSD, JUNE 11, 1975, JUNE 11, 1977,
LOWEST WATER LEVEL 131.40 BELOW LSD, SEP. 22, 1977.
RECORDS AVAILABLE 1975, 1977.

JUNE11, 1977 127.26, SEP.22, 1977 131.40.

373309099384901. 29-21W-5BBB. E. R. AND M. L. ESTES. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 131 FEET, DIAMETER 16 INCHES. MEASURING POINT, FLAP IN NORTH SIDE OF PUMP BASE, 0.5 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2410 FEET.
HIGHEST WATER LEVEL 79.50 BELOW LSD, MAY 5, 1956,
LOWEST WATER LEVEL 100.87 BELOW LSD, MAR. 29, 1977.
RECORDS AVAILABLE 1956, 1959-77.

DEC.20, 1976 98.53, MAR.29, 1977 100.87, SEP.29, 1977 99.74.

372957100110901. 29-26W-29ABB. O. J. DEAVER. DRILLED, WATFR-TABLE IRRIGATION WELL. DEPTH 170 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTH SIDE OF PUMP BASE, AT LAND SURFACE.
ALTITUDE OF LAND SURFACE 2550 FEET.
HIGHEST WATER LEVEL 60.75 BELOW LSD, JUNE 11, 1975,
LOWEST WATER LEVEL 73.03 BELOW LSD, SEP. 15, 1977.
RECORDS AVAILABLE 1971-77.

MAR.15, 1977 69.77, JUNE 8, 1977 71.01, SEP.15, 1977 73.03.

****** GEARY COUNTY

390356096455601. 11-6E-27CBA. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 65 FEET. MEASURING POINT, TOP OF PIPE, 2.00 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1057 FEET.
HIGHEST WATER LEVEL 15.35 BELOW LSD, SEP. 12, 1977,
LOWEST WATER LEVEL 20.82 BELOW LSD, MAR. 14, 1967.
RECORDS AVAILABLE 1966-77.

DEC. 7, 1976 16.66, JUNE14, 1977 16.13, SEP.12, 1977 15.35.

****** GOVE COUNTY

390709100125401. 11-26W-4CDC. J. C. STERRETT. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 12 INCHES, DEPTH 167 FEET. MEASURING POINT, HOLE IN NORTHEAST SIDE OF PUMP, 0.30 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2583 FEET.
HIGHEST WATER LEVEL 60.00 BELOW LSD, JULY 2, 1970,
LOWEST WATER LEVEL 85.29 BELOW LSD, SEP. 12, 1973.
RECORDS AVAILABLE 1970-77.

JAN. 6, 1977 61.03, JUNE 8, 1977 63.43, SEP. 8, 1977 67.25.

390611100185101. 11-27W-16AAA. H. E. NEHER. DRILLED, UNUSED WATER-TABLE WELL IN OGALLALA FORMATION. DIAMETER 5 INCHES, DEPTH 108 FEET. MEASURING POINT, BASE OF PUMP, AT LAND SURFACE. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2712.90 FEET.
HIGHEST WATER LEVEL 92.54 BELOW LSD, DEC. 10, 1969,
LOWEST WATER LEVEL 102.84 BELOW LSD, SEP. 8, 1977.
RECORDS AVAILABLE 1952-77.

JUNE 8, 1977 101.69, SEP. 8, 1977 102.84.

390316100163201. 11-27W-36BCC. MERTON IKENBERRY. DRILLFD, WATER-TABLE IRRIGATION WELL. DEPTH 142 FEET, DIAMETER INCHES. MEASURING POINT, HOLE IN PUMP BASE, SOUTHWEST SIDE, 0.6 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2632 FEET.
HIGHEST WATER LEVEL 75.09 BELOW LSD, JUNF 9, 1976,
LOWEST WATER LEVEL 82.23 BELOW LSD, MAR. 18, 1976.
RECORDS AVAILABLE 1975-77.

JAN. 6, 1977 77.09, JUNE 8, 1977 76.10, SEP. 8, 1977 81.55.

390723100320801. 11-29W-4DAD. ALBERT HOOVER. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 18 INCHES, DEPTH 171 FEET. MEASURING POINT, HOLE IN SOUTHWEST SIDE PUMP BASE, 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2844 FEET.
HIGHEST WATER LEVEL 112.18 BELOW LSD, JAN. 9, 1975,
LOWEST WATER LEVEL 128.28 BELOW LSD, SEP. 15, 1976.
RECORDS AVAILABLE 1968-77.

JAN. 6, 1977 112.90, JUNE 8, 1977 117.69, SEP. 8, 1977 128.00.

390428100380701. 11-30W-27ABB. W. J. KARLIN. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 12 INCHES, DEPTH 168 FEET. MEASURING POINT, CUTOUT IN EAST SIDE OF PUMP, 0.80 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2922.00 FEET.
HIGHEST WATER LEVEL 118.06 BELOW LSD, APR. 27, 1970,
LOWEST WATER LEVEL 137.99 BELOW LSD, SEP. 15, 1976.
RECORDS AVAILABLE 1970-77.

JAN. 6, 1977 124.94, JUNE 8, 1977 126.31, SEP. 8, 1977 128.62.

****** GRAHAM COUNTY

393229099503801. 6-23W-12CCB. H. HAUSER. DRILLED STOCK WELL IN OGALLALA FORMATION. DIAMETER 5 INCHES, DEPTH 69 FEET. MEASURING POINT, TOP OF CASING, 1.30 FEFT ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 58.22 BELOW LSD, FEB. 21, 1955,
LOWEST WATER LEVEL 65.56 BELOW LSD, DEC. 3, 1974.
RECORDS AVAILABLE 1952-71, 1973-76.

DEC.13, 1976 65.44G.

393032100002001. 6-24W-28BAB. ALLEN DAY. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER INCHES, DEPTH 212 FEET. MEASURING POINT, HOLE IN NORTHEAST SIDE OF PUMP BASE 0.6 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 96.12 BELOW LSD, JUNF 6, 1977,
LOWEST WATER LEVEL 105.21 BELOW LSD, MAR. 30, 1976.
RECORDS AVAILABLE 1976.

DEC.13, 1976 96.46, JUNE 6, 1977 96.12, SEP. 6, 1977 98.39.

****** GRAHAM COUNTY CONTINUED

392854099572501. 6-24W-30DDD, OLA KEITH, DRILLED,UNUSED, STOCKWELL IN OGALLALA FORMATION, DIAMETER 6 INCHES,
DEPTH 153 FEET. MEASURING POINT TOP OF CASING, 1.0FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 141.58 BELOW LSD, APR. 13, 1977,
LOWEST WATER LEVEL 143.10 BELOW LSD, SEP. 6, 1977.
RECORDS AVAILABLE 1977.

APR.13, 1977 141.58, JUNE 6, 1977 141.70, SEP. 6, 1977 143.10.

392959100073201. 6-25W-28CBC, HENRY KLEIN, DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION, DIAMETER
12 INCHES, DEPTH 180 FEET, MEASURING POINT, LOWER LIP OF PIPE IN PUMP BASE, 0.75 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 96.38 BELOW LSD, SEP. 4, 1962,
LOWEST WATER LEVEL 116.55 BELOW LSD, SEP. 15, 1975.
RECORDS AVAILABLE 1962-77.

DEC.13, 1976 111.63, JUNE 6, 1977 105.50, SEP. 6, 1977 108.90.

392051099503401. 6-23W-24BBD, GERALD WASINGER, WATER TABLE WELL DOMESTIC, UNUSED IN ALLUVIUM, DIAMETER 6 INCHES
DEPTH 9 FEET. MEASURING POINT TOP OF CASING 0.7 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 6.02 BELOW LSD, SEP. 6, 1977,
LOWEST WATER LEVEL 7.94 BELOW LSD, JUNE 6, 1977.
RECORDS AVAILABLE 1977.

APR.13, 1977 6.52, JUNE 6, 1977 7.94, SEP. 6, 1977 6.02.

****** GRANT COUNTY

374203101095101. 27-35W-17ADD. HERMAN E. MEYER. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 410 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP
HOLE IN SOUTHEAST SIDE STEEL PUMP BASE, 2.00 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3085.7 FEET.
HIGHEST WATER LEVEL 173.00 BELOW LSD, MAY 13, 1954,
LOWEST WATER LEVEL 216.39 BELOW LSD, DEC. 3, 1974.
RECORDS AVAILABLE 1954, 1958-60, 1963-77.

JAN.19, 1977 208.50, MAR. 8, 1977 208.70, SEP.20, 1977 208.91.

374406101221501. 27-37W-4ABB. C. L. JURY, JR. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 370 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN
SOUTHWEST SIDE OF PUMP BASE, 2.50 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 3079.8 FEET.
HIGHEST WATER LEVEL 74.16 BELOW LSD, MAR. 28, 1960,
LOWEST WATER LEVEL 143.56 BELOW LSD, SEP. 20, 1977.
RECORDS AVAILABLE 1958-61, 1963-77.

JAN.20, 1977 140.14, SEP.20, 1977 143.56R.

374337101215501. 27-37W-4DA. (S) C. L. JURY. DRILLED, UNUSED WATER-TABLE WELL IN DEPOSITS OF PLEISTOCENE AGE.
DIAMETER 6 INCHES, DEPTH 139 FEET. MEASURING POINT, TOP OF CASING, 0.40 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A. DISCONTINUED APRIL 1977.
ALTITUDE OF LAND SURFACE 3074 FEET.
HIGHEST WATER LEVEL 65.53 BELOW LSD, MAY 9, 1951, NOV. 28, 1951,
LOWEST WATER LEVEL 137.42 BELOW LSD, SEP. 11, 1974.
RECORDS AVAILABLE 1941-76.

NO MEASUREMENTS 1977 WATER YEAR.

374221101281501. 27-38W-15BBB. MRS. CHARLES ANDES. DRILLED IRRIGATION WELL IN DEPOSITS OF PLEISTOCENE AGE,
DAKOTA FORMATION, AND CHEYENNE SANDSTONE. DIAMETER 16 INCHES, DEPTH 479 FEET. MEASURING POINT, OUTSIDE EDGE OF BOLT HOLE AT BASE OF PUMP, 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3148.4 FEET.
HIGHEST WATER LEVEL 97.15 BELOW LSD, JAN. 15, 1958,
LOWEST WATER LEVEL 180.33 BELOW LSD, JUNE 19, 1975.
RECORDS AVAILABLE 1958-77.

JAN.20, 1977 176.39, MAR. 8, 1977 173.78, JUNE29, 1977 170.78, SEP.20, 1977 178.01.

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374100101270501. 27-38W-23CB. L. F. HOHNER. DRILLED, UNUSED WATER-TABLE WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 235 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP EAST SIDE OF CASING, 0.80 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3104.8 FEET.
HIGHEST WATER LEVEL 41.25 BELOW LSD, MAR. 9, 1943,
LOWEST WATER LEVEL 168.40 BELOW LSD, JUNE 23, 1970.
RECORDS AVAILABLE 1943, 1955, 1958-77.

JAN.20, 1977 134.51, MAR. 8, 1977 139.73C,JUNE22, 1977 138.82C,SEP.20, 1977 134.90C.

373924101302501. 27-38W-32BCC. G. M. COFFEY. DRILLED, UNUSED, WATER-TABLE WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 250 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP OF SOUTH SIDE OF CASING, 2.00 FEET ABOVE LSD. MEASURED BY K.S.B.A. THIS WELL IS A CONTINUOUS RECORDER. HOWEVER, ONLY A MONTHLY MEASUREMENT IS IN THIS FILE. BOARD OF AGRICULTURE HAS COMPLETE RECORD.
ALTITUDE OF LAND SURFACE 3131 FEET.
HIGHEST WATER LEVEL 49.66 BELOW LSD, NOV. 29, 1940,
LOWEST WATER LEVEL 157.04 BELOW LSD, SEP. 5, 1976.
RECORDS AVAILABLE 1940, 1958-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1976	157.73	JAN. 5, 1977	153.05	APR. 5, 1977	154.26	JULY 5, 1977	154.50
NOV. 5	156.29	FEB. 5	150.49	MAY 5	154.65	AUG. 5	156.13
DEC. 5	154.40	MAR. 5	151.89	JUNE 5	152.95	SEP. 5	157.08

373530101154601. 28-36W-21CDD. J. S. CONGDON. DRILLED, WATER-TABLE DOMESTIC WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 325 FEET, DIAMETER 6 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PLATE, 0.7 FOOT ABOVE LSD. MEASURING POINT CHANGED TO 5.95 FEET BELOW LSD, JUNE 17, 1975.
ALTITUDE OF LAND SURFACE 3066.3 FEET.
HIGHEST WATER LEVEL 193.85 BELOW LSD, FEB. 18, 1966,
LOWEST WATER LEVEL 250.76 BELOW LSD, JUNE 16, 1977.
RECORDS AVAILABLE 1966-68, 1970-77.

JAN.19, 1977 241.30, MAR. 8, 1977 226.49B,JUNE16, 1977 250.76B.

373853101203603. 28-37W-28BBB3. R. R. BECHTELHEIMER. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS, OGALLALA FORMATION AND UNDIFFFRENTIATED MESOZOIC DEPOSITS. DEPTH 618 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE INSIDE WEST SIDE OF PUMP BASE, 0.3 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 3087 FEET.
HIGHEST WATER LEVEL 160.15 BELOW LSD, JAN. 13, 1975,
LOWEST WATER LEVEL 243.55 BELOW LSD, MAR. 11, 1976.
RECORDS AVAILABLE 1974-77.

JAN.20, 1977 237.13, MAR. 8, 1977 235.33, SEP.20, 1977 237.68.

373750101313001. 28-38W-7BBB. MRS. DELIA PINEGAR. DRILLED, WATER-TABLE IRRIGATION WELL IN DEPOSITS OF PLIOCENE AND PLEISTOCENE AGE. DIAMETER 16 INCHES, DEPTH 284 FEET. MEASURING POINT, LOWER EDGE OF CUTOUT IN NORTH SIDE OF PUMP BASE, 0.70 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3134 FEET.
HIGHEST WATER LEVEL 82.36 BELOW LSD, MAR. 21, 1960,
LOWEST WATER LEVEL 208.38 BELOW LSD, JUNE 22, 1977.
RECORDS AVAILABLE 1958-77.

JAN.19, 1977 202.81, MAR. 8, 1977 204.06, JUNE22, 1977 208.38, SEP.20, 1977 204.11.

373716101250601. 28-38W-12DDD. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 367 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.70 FEET ABOVE LSD. MEASURING POINT CHANGED TO 1.5 FEET ABOVE LSD, SEPTEMBER 21, 1964. G = MEASURED BY K.S.B.A. MP CHANGED TO 0.97 FOOT BELOW LSD, SEPTEMBER 11, 1974.
ALTITUDE OF LAND SURFACE 3080.3 FEET.
HIGHEST WATER LEVEL 72.06 BELOW LSD, MAR. 2, 1966,
LOWEST WATER LEVEL 209.50 BELOW LSD, SEP. 9, 1970.
RECORDS AVAILABLE 1963-76.

JAN.20, 1977 148.88, MAR. 8, 1977 178.58, JUNE22, 1977 163.03, SEP.20, 1977 176.46.

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373707101292701. 28-38W-17AAA. U. S. GEOL. SURVEY. DRILLED, WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 390 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 4.0 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3111.8 FEET.
HIGHEST WATER LEVEL 100.41 BELOW LSD, FEB. 21, 1966,
LOWEST WATER LEVEL 198.01 BELOW LSD, JUNE 22, 1977.
RECORDS AVAILABLE 1963-77.

JAN.19, 1977 191.60, MAR. 8, 1977 191.38C,JUNE29, 1977 198.01C,SEP.20, 1977 198.06.

373414101285803. 28-38W-33BDD U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 400 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. MP BROKEN OFF 3 FEET, JANUARY 22, 1970.
ALTITUDE OF LAND SURFACE 3127.5 FEET.
HIGHEST WATER LEVEL 87.90 BELOW LSD, MAR. 3, 1966,
LOWEST WATER LEVEL 154.25 BELOW LSD, SEP. 20, 1977,
RECORDS AVAILABLE 1963-77.

JAN.19, 1977 146.01, MAR. 8, 1977 147.19, JUNE29, 1977 150.39, SEP.20, 1977 154.25C.

373339101112801. 29-35W-6BAA. F. H. HAMPTON. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 376 FEET, DIAMETER 16 INCHES. MEASURING POINT, LOWER EDGE OF CUT-OUT IN PUMP BASE, 1.0 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 3053.6 FEET.
HIGHEST WATER LEVEL 207.70 BELOW LSD, MAR. 16, 1973,
LOWEST WATER LEVEL 232.60 BELOW LSD, JAN. 20, 1971.
RECORDS AVAILABLE 1959-60, 1963-77.

JAN.19, 1977 220.20, MAR. 8, 1977 215.36, JUNE16, 1977 220.10, SEP.20, 1977 218.10.

372832101210801. 29-37W-34DCC. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 400 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 5.00 FEET ABOVE LSD. G = MEASURED BY K.S.B.A. MP CHANGED TO 0.94 FOOT ABOVE LSD, JUNE 11, 1973, DISCONTINUED APRIL 1977.
ALTITUDE OF LAND SURFACE 3089 FEET.
HIGHEST WATER LEVEL 151.10 BELOW LSD, FEB. 26, 1964,
LOWEST WATER LEVEL 226.95 BELOW LSD, SEP. 9, 1975.
RECORDS AVAILABLE 1963-76.

NO MEASUREMENTS 1977 WATER YEAR.

372832101265901. 29-38W-35CCD. RAY R. KEPLEY. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 271 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN SOUTH SIDE OF PUMP, 1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3124 FEET.
HIGHEST WATER LEVEL 100.24 BELOW LSD, APR. 1, 1960,
LOWEST WATER LEVEL 159.01 BELOW LSD, SEP. 15, 1976.
RECORDS AVAILABLE 1958-60, 1963-77.

JAN.20, 1977 145.71, MAR. 8, 1977 152.45, JUNE16, 1977 140.75, SEP.20, 1977 155.62.

372026101125501. 30-36W-1BBB. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 400 FEET, DIAMETER 1.25 FEET. MEASURING POINT, TOP OF PIPE, 3.00 FEET ABOVE LSD. PRIOR TO JANUARY 1974, MP WAS 3.6 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2972.6 FEET.
HIGHEST WATER LEVEL 120.64 BELOW LSD, MAR. 2, 1966,
LOWEST WATER LEVEL 208.05 BELOW LSD, JUNE 16, 1977.
RECORDS AVAILABLE 1963-77.

JAN.20, 1977 182.30, MAR. 8, 1977 177.93, JUNE16, 1977 208.05, SEP.20, 1977 201.57.

372357101171501. 30-36W-32BBC. MRS. FANNIE GROLLIER. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 370 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP BASE, 1.3 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3063.7 FEET.
HIGHEST WATER LEVEL 112.89 BELOW LSD, MAR. 21, 1960,
LOWEST WATER LEVEL 161.76 BELOW LSD, SEP. 9, 1976.
RECORDS AVAILABLE 1960, 1963-66, 1968-77.

JAN.20, 1977 144.77, MAR. 8, 1977 156.29, JUNE16, 1977 158.71, SEP.20, 1977 159.08.

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372759101210001. 30-37W-30DBA. EARL STEEN. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 55 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP BASE, 2.00 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3100 FEET.
HIGHEST WATER LEVEL 149.14 BELOW LSD, MAR. 31, 1960.
LOWEST WATER LEVEL 263.20 BELOW LSD, JAN. 20, 1977.
RECORDS AVAILABLE 1959-60, 1962-65, 1967-77.

JAN.20, 1977 263.20, JUNE16, 1977 247.90, SEP.20, 1977 248.81.

372515101235101. 30-37W-20CBC. J. H. LEWIS. DRILLED, WATER-TABLE IRRIGATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 335 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN SOUTH SIDE OF PUMP BASE, 0.65 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3125 FEET.
HIGHEST WATER LEVEL 114.29 BELOW LSD, APR. 16, 1942.
LOWEST WATER LEVEL 203.10 BELOW LSD, JUNE 16, 1977.
RECORDS AVAILABLE 1941-42, 1952-77.

JAN.20, 1977 188.74, MAR. 8, 1977 199.6AC,JUNE16, 1977 203.10, SEP.20, 1977 192.52.

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375520100202701. 24-28W-36ACA. ART SCHARTZ. DRILLED, ARTESIAN IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 135 FEET. MEASURING POINT, PUMP BASE, 0.9 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2720.1 FEET.
HIGHEST WATER LEVEL 82.24 BELOW LSD, JAN. 20, 1965.
LOWEST WATER LEVEL 94.47 BELOW LSD, SEP. 14, 1977.
RECORDS AVAILABLE 1956, 1959-77.

JAN. 7, 1977 92.55, MAR. 3, 1977 92.66, SEP.14, 1977 94.47.

375732100363001. 24-30W-15CCC. WALTER NICHOLSON. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 240 FEET, DIAMETER 18 INCHES. MEASURING POINT, 1.0 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2846.0 FEET.
HIGHEST WATER LEVEL 117.00 BELOW LSD, JAN. 10, 1966.
LOWEST WATER LEVEL 142.60 BELOW LSD, JAN. 5, 1977.
RECORDS AVAILABLE 1965-77.

JAN. 5, 1977 142.60, JUNE 6, 1977 128.66, SEP.14, 1977 129.86.

374416100280401. 26-29W-35CCC. FLOYD FRACK. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 210 FEET, DIAMETER INCHES. MEASURING POINT, HOLE IN SOUTH SIDE OF PUMP BASE, 0.1 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2742 FEET.
HIGHEST WATER LEVEL 65.80 BELOW LSD, JAN. 20, 1969.
LOWEST WATER LEVEL 83.33 BELOW LSD, JUNE 22, 1976.
RECORDS AVAILABLE 1965-77.

JAN. 7, 1977 78.39, MAR.15, 1977 79.16, JUNE 8, 1977 79.96, SEP.15, 1977 81.72.

373947100134201. 27-27W-25CCD. ARTHUR SLOCUM. DRILLED WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 200 FEET, DIAMETER 16 INCHES. MEASURING POINT, LOWER EDGE OF HOLE ON SOUTHEAST SIDE OF PUMP, 0.7 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2732.0 FEET.
HIGHEST WATER LEVEL 163.85 BELOW LSD, JAN. 17, 1968.
LOWEST WATER LEVEL 176.06 BELOW LSD, JUNE 7, 1972.
RECORDS AVAILABLE 1937, 1940, 1965-77.

JAN.11, 1977 171.00, MAR.15, 1977 171.17, JUNE 8, 1977 171.54, SEP.15, 1977 173.92.

374126100343401. 27-30W-23BB. HOSKINSON BROS. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 135 FEET, DIAMETER 16 INCHES. MEASURING POINT, CUT-OUT IN NORTH SIDE OF PUMP BASE, 1.0 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2771.56 FEET.
HIGHEST WATER LEVEL 62.50 BELOW LSD, DEC. 10, 1964.
LOWEST WATER LEVEL 86.51 BELOW LSD, SEP. 15, 1977.
RECORDS AVAILABLE 1964-77.

JAN.10, 1977 82.42, JUNE 8, 1977 83.41, SEP.15, 1977 86.51.

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373709100374701. 28-30-17BBA. EARL A. NELSON. DRILLED, ARTESIAN IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 300 FEET. MEASURING POINT, UPPER EDGE OF HOLE IN SOUTH SIDE OF PUMP, 0.8 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. MP CHANGED TO 0.1 FOOT ABOVE LSD, JANUARY 1974.
ALTITUDE OF LAND SURFACE 2817.0 FEET.
HIGHEST WATER LEVEL 107.05 BELOW LSD, JAN. 6, 1959.
LOWEST WATER LEVEL 145.26 BELOW LSD, SEP. 15, 1977.
RECORDS AVAILABLE 1959-77.

JAN.10, 1977 139.15, MAR.15, 1977 140.17, JUNE 8, 1977 143.40, SEP.15, 1977 145.26.

373614100331601. 28-30W-26BAB. ALLEN ISAAC. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 242 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP EDGE OF HOLE IN SOUTH SIDE OF PUMP HEAD, 0.80 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2804.0 FEET.
HIGHEST WATER LEVEL 115.37 BELOW LSD, APR. 2, 1962.
LOWEST WATER LEVEL 152.44 BELOW LSD, SEP. 16, 1976.
RECORDS AVAILABLE 1961-77.

JAN.10, 1977 145.62, SEP.15, 1977 151.22.

372922100232701. 29-28W-28CDC. DELBERT MCCUNE. DRILLED, ARTESIAN IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 204 FEET. MEASURING POINT, HOLE IN SOUTHWEST SIDE OF PUMP BASE, 1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2688.0 FEET.
HIGHEST WATER LEVEL 87.60 BELOW LSD, APR. 18, 1960.
LOWEST WATER LEVEL 104.89 BELOW LSD, JUNE 8, 1977.
RECORDS AVAILABLE 1959-77.

JAN.11, 1977 102.44, MAR.15, 1977 104.42, JUNE 8, 1977 104.89, SEP.15, 1977 104.04.

373247100291101. 29-29W-10BBB. WALTER SCHMIDT. DRILLED, ARTESIAN IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 151 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 1.5 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2743.0 FEET.
HIGHEST WATER LEVEL 85.30 BELOW LSD, JAN. 6, 1960.
LOWEST WATER LEVEL 110.47 BELOW LSD, SEP. 16, 1976.
RECORDS AVAILABLE 1959-77.

JAN.10, 1977 109.05, JUNE 8, 1977 106.39, SEP.15, 1977 108.76.

****** GREELEY COUNTY

384139101354901. 16-39W-28DC, F. J. HERL + SONS. (REPLACEMENT FOR 16-39W-30AA.) DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 190 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTH SIDE OF PUMP, 1.5 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3520 FEET.
HIGHEST WATER LEVEL 100.80 BELOW LSD, JAN. 24, 1970.
LOWEST WATER LEVEL 126.55 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1970-77.

JAN.17, 1977 119.65, MAR.10, 1977 119.76, JUNE13, 1977 121.77, SEP.26, 1977 126.55.

383841101363801. 16-39W-22DCB. ANDREW BERNING. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 163 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTHEAST SIDE OF PUMP BASE, 1.0 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3529 FEET.
HIGHEST WATER LEVEL 87.22 BELOW LSD, JAN. 28, 1965.
LOWEST WATER LEVEL 126.44 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1964-77.

JAN.17, 1977 122.40, JUNE13, 1977 121.87, SEP.26, 1977 126.44.

383650101381601. 16-39W-33CCC. ROBERT HOARD. DRILLED, WATER-TABLE DOMESTIC AND STOCK WELL IN OGALLALA FORMATION. DEPTH 106.2 FEET, DIAMETER 6 INCHES. MEASURING POINT, TOP BOARD COVERING CASING, 0.8 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. DISCONTINUED MARCH 1977.
ALTITUDE OF LAND SURFACE 3533 FEET.
HIGHEST WATER LEVEL 71.67 BELOW LSD, MAR. 10, 1965.
LOWEST WATER LEVEL 79.36 BELOW LSD, JUNE 15, 1976.
RECORDS AVAILABLE 1948, 1959-77.

JAN.17, 1977 78.28, MAR.10, 1977 77.84.

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383947101463701. 16-40W-18DBA. GORDON CAVENEE. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 210 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP BASE, 0.5 FOOT ABOVE LSD. 8 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3691 FEET.
HIGHEST WATER LEVEL 126.70 BELOW LSD, JAN. 18, 1966,
LOWEST WATER LEVEL 153.81 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1965-77.

JAN.17, 1977 150.75, MAR.10, 1977 150.52, JUNE13, 1977 152.78, SEP.26, 1977 153.81.

383915101522901. 16-41W-28BAD. JACK BARR. (PREVIOUSLY PUBLISHED AS 16-41W-20ABC) REPLACEMENT WELL FOR 16-41W-20ABC. DRILLED, WATER-TABLE IRRIGATION WELLIN OGALLALA FORMATION. DEPTH 250 FEET, DIAMETER 18 INCHES. MEASURING POINT, HOLE ON EAST SIDE OF PUMP, 2.0 FEET ABOVE LSD. 8 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3738.9 FEET.
HIGHEST WATER LEVEL 131.34 BELOW LSD, MAR. 30, 1966,
LOWEST WATER LEVEL 161.74 BELOW LSD, SEP. 21, 1976.
RECORDS AVAILABLE 1966-77.

JAN.17, 1977 149.43, JUNE13, 1977 146.07, SEP.26, 1977 152.05B.

383643101354101. 17-39W-2BAA. NORMAN H. WEDALT. DRILLED WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. MEASURING POINT, HOLE IN PUMP BASE, 0.5 FOOT ABOVELSD. DEPTH UNKNOWN. REPLACES WELL 16-39W-33CCC. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3511 FEET.
HIGHEST WATER LEVEL 101.76 BELOW LSD, FEB. 1, 1972, MAR. 11, 1977,
LOWEST WATER LEVEL 108.05 BELOW LSD, JUNE 13, 1977.
RECORDS AVAILABLE 1972, 1977.

MAR.11, 1977 101.76, JUNE13, 1977 108.05.

383405101363901. 17-39W-22ABB. F. H. KLEYMANN AND SONS. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 194 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN EAST SIDE OF PUMP BASE, 0.3 FOOT ABOVE LSD. 8 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3527 FEET.
HIGHEST WATER LEVEL 119.50 BELOW LSD, JAN. 28, 1965,
LOWEST WATER LEVEL 138.68 BELOW LSD, SEP. 17, 1974.
RECORDS AVAILABLE 1965-77.

JAN.18, 1977 124.22, JUNE13, 1977 126.14, SEP.26, 1977 136.90.

383418101435701. 17-40W-15CCB. J. E. SMITH. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 200 FEET, DIAMETER 18 INCHES. MEASURING POINT, HOLE IN EAST SIDE OF PUMP BASE, 0.4 FOOT ABOVE LSD. 8 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3607 FEET.
HIGHEST WATER LEVEL 125.16 BELOW LSD, NOV. 5, 1962,
LOWEST WATER LEVEL 143.59 BELOW LSD, SEP. 17, 1974.
RECORDS AVAILABLE 1962-77.

JAN.18, 1977 135.00, MAR.10, 1977 134.34, JUNE13, 1977 136.57, SEP.26, 1977 139.81.

383220101470801. 17-40W-31BBA. SMITH RANCH. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 250 FEET. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 0.3 FOOT ABOVE LSD. 8 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3663 FEET.
HIGHEST WATER LEVEL 164.88 BELOW LSD, SEP. 28, 1965,
LOWEST WATER LEVEL 191.60 BELOW LSD, SEP. 16, 1975.
RECORDS AVAILABLE 1965-77.

JAN.17, 1977 188.10, MAR.10, 1977 174.50, JUNE13, 1977 182.07.

383228101525901. 17-41W-30DDD. R. DARLAND. DRILLED, WATER-TABLE ABANDONED STOCK WELL IN OGALLALA FORMATION. DEPTH 112 FEET, DIAMETER 6 INCHES. MEASURING POINT, TOP OF CASING, 0.5 FOOT ABOVE LSD. 8 = MEASURED BY K.S.B.A. DISCONTINUED MARCH 1977.
ALTITUDE OF LAND SURFACE 3740.9 FEET.
HIGHEST WATER LEVEL 87.50 BELOW LSD, DEC. 20, 1967,
DRY, WATER LEVEL NOT MEASUREABLE, JAN. 17, 1977.
RECORDS AVAILABLE 1947, 1967-77.

JAN.17, 1977 F .

****** GREELEY COUNTY CONTINUED

383247101572001. 17-42W-27CBB. CECIL DUNHAM. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 58 FEET, DIAMETER 8 INCHES. MEASURING POINT, EDGE OF HOLE EAST SIDE OF PUMP, 1.0 FOOT ABOVE LSD. MEASURING POINT CHANGED TO 1.1 FEET ABOVE LSD MARCH 10 1977. REPLACES WELL 17-41W-30DDD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3768 FEET.
HIGHEST WATER LEVEL 34.47 BELOW LSD, JAN. 24, 1974.
LOWEST WATER LEVEL 46.28 BELOW LSD, FEB. 1, 1972.
RECORDS AVAILABLE 1971-77.

JAN.17, 1977 39.66, MAR.10, 1977 38.71, JUNE13, 1977 37.72, SEP.26, 1977 38.61.

****** HAMILTON COUNTY

375815101442401. 24-40W-17BBB. JOHN H. SMITH. DRILLED, WATER-TABLE IRRIGATION WELL IN PLIO-PLEIST SERIES. DEPTH 59 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE INSIDE PUMP BASE, SOUTHWEST CORNER, 0.8 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3221.2 FEET.
HIGHEST WATER LEVEL 14.96 BELOW LSD, DEC. 11, 1973.
LOWEST WATER LEVEL 20.71 BELOW LSD, SEP. 5, 1974.
RECORDS AVAILABLE 1970-77.

FEB.16, 1977 16.58, JUNE21, 1977 17.97, SEP.16, 1977 18.71.

374708101562401. 26-42W-17CB. MARION WECKERLY. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS, OGALLALA FORMATION, AND UNDIFFERENTIATED MESOZOIC DEPOSITS. DEPTH 749 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP BASE, AT LAND SURFACE. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3458 FEET.
HIGHEST WATER LEVEL 100.00 BELOW LSD, FEB. 6, 1960.
LOWEST WATER LEVEL 142.47 BELOW LSD, MAR. 7, 1977.
RECORDS AVAILABLE 1960-77.

FEB.16, 1977 140.44, MAR. 7, 1977 142.47, SEP.19, 1977 141.21.

374606101540201. 26-42W-22CDD. HAROLD PAYNE. DRILLED, ARTESIAN IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 265 FEET, DIAMETER 16 INCHES. MEASURING POINT, SOUTHEAST SIDE OF PUMP, 1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3411.5 FEET.
HIGHEST WATER LEVEL 87.42 BELOW LSD, JAN. 5, 1960.
LOWEST WATER LEVEL 137.13 BELOW LSD, MAR. 7, 1977.
RECORDS AVAILABLE 1959-77.

FEB.16, 1977 134.16, MAR. 7, 1977 137.13, SEP.19, 1977 134.85.

****** HARVEY COUNTY

375810097324301. 24-2W-16BAA. (886) F. H. HAIBER. DRILLED, UNUSED, WATER-TABLE WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 1.25 INCHES, DEPTH 57 FEET. MEASURING POINT, TOP OF PIPE, 0.80 FOOT ABOVE LSD. MEASURED BY CITY OF WICHITA.
ALTITUDE OF LAND SURFACE 1402.23 FEET.
HIGHEST WATER LEVEL 2.34 BELOW LSD, AUG. 21, 1939.
LOWEST WATER LEVEL 31.86 BELOW LSD, AUG. 1, 1956.
RECORDS AVAILABLE 1939-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1976	21.70	JAN. 21, 1977	20.94	APR. 20, 1977	20.77	AUG. 19, 1977	22.42
OCT. 20	21.18	FEB. 18	22.31	MAY 20	22.99	SEP. 20	21.18
NOV. 19	21.18	MAR. 8	20.25	JUNE 20	22.78	SEP. 28	20.92
DEC. 20	21.47	MAR. 21	22.49	JUNE 27	21.37		

****** HASKELL COUNTY

374013100564001. 27-33W-29DAA. W. T. KELLS. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 452 FEET, DIAMETER 16 INCHES. MEASURING POINT, SLOPING PIPE WEST SIDE, 1.3 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2995.4 FEET.
HIGHEST WATER LEVEL 186.30 BELOW LSD, JAN. 20, 1966.
LOWEST WATER LEVEL 235.89 BELOW LSD, SEP. 20, 1977.
RECORDS AVAILABLE 1965-77.

JAN.28, 1977 223.77, MAR. 8, 1977 228.63, JUNE16, 1977 230.41, SEP.20, 1977 235.89G.

****** HASKELL COUNTY CONTINUED

374136101020002. 27-34W-16DDD2. TOMMY LEWIS. DRILLED. WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 480 FEET. DIAMETER 1.25 INCHES. MEASURING POINT. TOP OF PIPE. 1.5 FEET ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2995.0 FEET.
HIGHEST WATER LEVEL 140.05 BELOW LSD. JAN. 24. 1967.
LOWEST WATER LEVEL 155.59 BELOW LSD. SEP. 15. 1976.
RECORDS AVAILABLE 1967-77.

FEB. 1. 1977 154.69. MAR. 8. 1977 154.49.

373710100521002. 28-32W-18BBB2. EARL MEAIRS. DRILLED. WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 438 FEET. DIAMETER 18 INCHES. MEASURING POINT. TOP OF PIPE. 0.6 FOOT ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2951.3 FEET.
HIGHEST WATER LEVEL 203.30 BELOW LSD. OCT. 4. 1966.
LOWEST WATER LEVEL 250.25 BELOW LSD. FEB. 16. 1977.
RECORDS AVAILABLE 1966-77.

FEB.16. 1977 250.25.

373556100464201. 28-32W-24BCC. ALTA M. WEIDNER. DRILLED. WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 250 FEET. DIAMETER 18 INCHES. MEASURING POINT. HOLE INSIDE PUMP BASE. EAST SIDE. 0.1 FOOT ABOVE LSD. 0 = MEASURED BY K.S.B.A. MP CHANGED TO 1.0 FOOT ABOVE LSD. JANUARY 1976.
ALTITUDE OF LAND SURFACE 2910 FEET.
HIGHEST WATER LEVEL 172.30 BELOW LSD. JULY 7. 1965.
LOWEST WATER LEVEL 213.50 BELOW LSD. SEP. 15. 1977.
RECORDS AVAILABLE 1964-77.

JAN.28. 1977 205.60. MAR.15. 1977 205.04. JUNE 8. 1977 205.28. SEP.15. 1977 213.50.

373558100563201. 28-33W-21BCC. DAVE RINEHART. DRILLED. WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 310 FEET. DIAMETER 16 INCHES. MEASURING POINT. TOP OF ACCESS PIPE. 0.5 FOOT SOUTH OF PUMP. 0.35 FOOT ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2973.55 FEET.
HIGHEST WATER LEVEL 227.20 BELOW LSD. MAR. 15. 1966.
LOWEST WATER LEVEL 294.67 BELOW LSD. SEP. 20. 1977.
RECORDS AVAILABLE 1964-77.

MAR. 1. 1977 283.83. MAR. 8. 1977 288.21C.JUNE16. 1977 287.26. SEP.20. 1977 294.67.

373642101011201. 28-34W-15DAB. R. + A. STONESTREET. DRILLED. WATER-TABLE IRRIGATION WELL. DEPTH 400 FEET. DIAMETER INCHES. MEASURING POINT. SLOPING PIPE IN SOUTH SIDE OF PUMP. 1.0 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 3020 FEET.
HIGHEST WATER LEVEL 263.00 BELOW LSD. JUNE 6. 1966.
LOWEST WATER LEVEL 292.93 BELOW LSD. JUNE 8. 1976.
RECORDS AVAILABLE 1966. 1970-77.

FEB. 1. 1977 290.81.

372941100474502. 29-32W-26CB2. KELLY MCCLURE. DRILLED. WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 384 FEET. DIAMETER 16 INCHES. MEASURING POINT. 0.7 FOOT ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2895 FEET.
HIGHEST WATER LEVEL 199.16 BELOW LSD. JAN. 6. 1961.
LOWEST WATER LEVEL 232.72 BELOW LSD. JAN. 28. 1977.
RECORDS AVAILABLE 1960-77.

JAN.28. 1977 232.72. MAR.15. 1977 232.16. JUNE 8. 1977 232.64.

372958100563301. 29-33W-28BCB. S. & G. HALL. DRILLED. WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH FEET. DIAMETER INCHES. MEASURING POINT. LOWER LIP OF SLANT PIPE. NORTH SIDE OF CONCRETE. 0.3 FOOT ABOVE LSD. REPLACES WELL 29-33W-15AAA.
ALTITUDE OF LAND SURFACE 2963 FEET.
HIGHEST WATER LEVEL 237.03 BELOW LSD. JAN. 21. 1970.
LOWEST WATER LEVEL 269.77 BELOW LSD. SEP. 20. 1977.
RECORDS AVAILABLE 1970. 1973-77.

FEB. 1. 1977 268.15. SEP.20. 1977 269.77B.

****** HASKELL COUNTY CONTINUED

373228100595701. 29-34W-11ADD. H. C. RICKER. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 505 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP EDGE BOLT HOLE IN NORTHEAST SIDE OF PUMP BASE, 0.3 FOOT ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2961 FEET.
HIGHEST WATER LEVEL 209.72 BELOW LSD, JAN. 20, 1966.
LOWEST WATER LEVEL 265.23 BELOW LSD, FEB. 1, 1977.
RECORDS AVAILABLE 1964-73, 1976-77.

FEB. 1, 1977 265.23.

372640100414601. 30-31W-15ABB. LEROY STAPELTON. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 348 FEET, DIAMETER INCHES. MEASURING POINT, HOLE IN PUMP BASE, 1.5 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2852 FEET.
HIGHEST WATER LEVEL 180.73 BELOW LSD, MAR. 8, 1971.
LOWEST WATER LEVEL 220.99 BELOW LSD, MAR. 15, 1977.
RECORDS AVAILABLE 1948, 1970-77.

JAN.21, 1977 213.39, MAR.15, 1977 220.99C,JUNE 8, 1977 215.21, SEP.15, 1977 218.93.

372730100474501. 30-32W-11BBB. VIRGIL WATSON. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 412 FEET, DIAMETER 16 INCHES. MEASURING POINT, EDGE OF SLOPING 1.5-INCH PIPE ON EAST SIDE OF PUMP-HEAD BASE, 0.7 FOOT ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2885 FEET.
HIGHEST WATER LEVEL 195.39 BELOW LSD, APR. 2, 1962.
LOWEST WATER LEVEL 231.55 BELOW LSD, SEP. 15, 1977.
RECORDS AVAILABLE 1961-77.

JAN.21, 1977 227.65, MAR.15, 1977 228.56, JUNE 8, 1977 228.76, SEP.15, 1977 231.55.

372405100520501. 30-32W-31BAB. LEMON AND MILLER. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 380 FEET, DIAMETER 16 INCHES. MEASURING POINT, LOWER LIP OF SLOPING PIPE, SOUTH SIDE OF PUMP, 0.6 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2906.0 FEET.
HIGHEST WATER LEVEL 195.38 BELOW LSD, FEB. 24, 1959.
LOWEST WATER LEVEL 235.07 BELOW LSD, SEP. 15, 1977.
RECORDS AVAILABLE 1958-59, 1965-66, 1968-77.

JAN.21, 1977 227.92, MAR.15, 1977 228.50, JUNE 8, 1977 229.55, SEP.15, 1977 235.07.

372425100583501. 30-33W-30CBD. EMIL SCHNELLBACKER. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 415 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP BASE, 0.3 FOOT ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2962.9 FEET.
HIGHEST WATER LEVEL 219.78 BELOW LSD, JAN. 20, 1966.
LOWEST WATER LEVEL 241.71 BELOW LSD, SEP. 20, 1977.
RECORDS AVAILABLE 1965-66, 1968-77.

JAN.21, 1977 238.85, SEP.20, 1977 241.71.

372825101041201. 30-34W-5BBB. ROONEY AND ROONEY. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 410 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP EDGE OF SLOPING PIPE, EAST SIDE, 0.5 FOOT ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3006 FEET.
HIGHEST WATER LEVEL 190.00 BELOW LSD, FEB. 15, 1957.
LOWEST WATER LEVEL 269.49 BELOW LSD, SEP. 20, 1977.
RECORDS AVAILABLE 1957-58, 1960, 1963-77.

JAN.21, 1977 265.30, SEP.20, 1977 269.49.

372436101042001. 30-34W-30ADD. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 86 FEET, DIAMETER 1.5 INCHES. MEASURING POINT, TOP OF PIPE, 2.2 FEET ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2836 FEET.
HIGHEST WATER LEVEL 50.84 BELOW LSD, MAR. 13, 1967.
LOWEST WATER LEVEL 81.48 BELOW LSD, SEP. 20, 1977.
RECORDS AVAILABLE 1966-77.

JAN.21, 1977 80.33, MAR. 8, 1977 80.86, JUNE16, 1977 80.27, SEP.20, 1977 81.48.

****** HODGEMAN COUNTY

380752099414101. 22-22W-13CCC. WILLIAM MACEY. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 1.25 INCHES, DEPTH 49 FEET. MEASURING POINT, TOP OF PIPE, 3.4 FEET ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2192 FEET.
HIGHEST WATER LEVEL 23.70 BELOW LSD, DEC. 29, 1965, MAR. 20, 1974,
LOWEST WATER LEVEL 34.49 BELOW LSD, SEP. 27, 1976.
RECORDS AVAILABLE 1965-77.

DEC.23, 1976 32.56, MAR.23, 1977 32.15, JUNE14, 1977 33.41, SEP.26, 1977 33.67.

380544099525201. 22-23W-31ADD. DANIEL L. HAYS. DRILLED, WATER-TABLE STOCK WELL IN DAKOTA FORMATION. DEPTH 315 FEET, DIAMETER 6 INCHES. MEASURING POINT, TOP OF CONCRETE, 0.8 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2340 FEET.
HIGHEST WATER LEVEL 123.99 BELOW LSD, APR. 27, 1973,
LOWEST WATER LEVEL 233.30 BELOW LSD, AUG. 27, 1971.
RECORDS AVAILABLE 1969-77.

MAR.30, 1977 194.08, JUNE20, 1977 188.31.

380833099560201. 22-24W-14BBC. CLARE SHRIWISE. DRILLED, ARTESIAN IRRIGATION WELL IN DAKOTA FORMATION. DEPTH 560 FEET, DIAMETER 16 INCHES. MEASURING POINT, 3/4-INCH PLUG IN SOUTHWEST CORNER OF PUMP BASE, 0.2 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2460 FEET.
HIGHEST WATER LEVEL 252.00 BELOW LSD, MAR. 22, 1971,
LOWEST WATER LEVEL 344.08 BELOW LSD, SEP. 23, 1975.
RECORDS AVAILABLE 1971-76.

NO MEASUREMENTS 1977 WATER YEAR.

380827099564301. 22-24W-15BDA. W. E. MCKIBBEN. DRILLED, ARTESIAN IRRIGATION WELL IN DAKOTA FORMATION. DEPTH 580 FEET, DIAMETER 16 INCHES. MEASURING POINT, 3/4-INCH PLUG IN SOUTHEAST CORNER OF PUMP BASE, 1.0 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2463 FEET.
HIGHEST WATER LEVEL 249.35 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 341.15 BELOW LSD, SEP. 23, 1975.
RECORDS AVAILABLE 1971-76.

NO MEASUREMENTS 1977 WATER YEAR.

380827099572502. 22-24W-16ADB2. WAYNE SHRIWISE. DRILLED, ARTESIAN WELL IN DAKOTA FORMATION. DEPTH 565 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF CASING, AT LAND SURFACE. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2465 FEET.
HIGHEST WATER LEVEL 242.70 BELOW LSD, MAY 23, 1973,
LOWEST WATER LEVEL 341.88 BELOW LSD, SEP. 28, 1976.
RECORDS AVAILABLE 1972-77.

JAN. 3, 1977 311.41, MAR.30, 1977 301.12, JUNE20, 1977 317.73.

380701099535801. 22-24W-24DDD. BERNARD SPRINGER. DRILLED, ARTESIAN DOMESTIC WELL IN DAKOTA FORMATION. DEPTH 410 FEET, DIAMETER 6 INCHES. MEASURING POINT, HOLE IN PLATE, TOP OF CASING, 4.7 FEET BELOW LSD.
ALTITUDE OF LAND SURFACE 2360 FEET.
HIGHEST WATER LEVEL 154.40 BELOW LSD, MAR. 22, 1971,
LOWEST WATER LEVEL 252.15 BELOW LSD, AUG. 27, 1971.
RECORDS AVAILABLE 1970-77.

JAN. 3, 1977 199.63.

380609099540701. 22-24W-25DDC. DARRELL CRAGHEAD. DRILLED, ARTESIAN STOCK WELL IN DAKOTA FORMATION. DEPTH 330 FEET, DIAMETER 6 INCHES. MEASURING POINT, HOLE IN PLATE ON TOP OF CASING, 5.0 FEET BELOW LSD.
ALTITUDE OF LAND SURFACE 2332 FEET.
HIGHEST WATER LEVEL 128.27 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 226.35 BELOW LSD, AUG. 27, 1971.
RECORDS AVAILABLE 1970-77.

JAN. 3, 1977 160.12, MAR.30, 1977 187.54, JUNE20, 1977 186.40.

****** HODGEMAN COUNTY CONTINUED

380616099553401. 22-24W-26DDA. LEONARD FORD. DRILLED, ARTESIAN STOCK WELL IN DAKOTA FORMATION. DEPTH 240 FEET, DIAMETER 6 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 0.5 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2365 FEET.
HIGHEST WATER LEVEL 165.34 BELOW LSD, JAN. 16, 1974,
LOWEST WATER LEVEL 220.35 BELOW LSD, NOV. 25, 1970.
RECORDS AVAILABLE 1970-72, 1974, 1976-77.

JAN. 3, 1977 168.45.

380604099583101. 22-24W-32AAB. MRS. WILBUR WALTER. DRILLED, ARTESIAN DOMESTIC AND STOCK WELL IN DAKOTA FORMATION. DEPTH 340 FEET, DIAMETER 6 INCHES. MEASURING POINT, TOP OF CONCRETE WELL CURB ON NORTH SIDE, AT LAND SURFACE.
ALTITUDE OF LAND SURFACE 2454 FEET.
HIGHEST WATER LEVEL 222.70 BELOW LSD, MAR. 22, 1971,
LOWEST WATER LEVEL 261.38 BELOW LSD, AUG. 21, 1972.
RECORDS AVAILABLE 1971-73, 1976.

NO MEASUREMENTS 1977 WATER YEAR.

380517099565201. 22-24W-34CDC. CECIL J. SHELTON. DRILLED, ARTESIAN DOMESTIC AND STOCK WELL IN DAKOTA FORMATION. DEPTH 416 FEET, DIAMETER 6 INCHES. MEASURING POINT, TOP OF METAL RING ON SOUTH SIDE OF PIT, 0.3 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2354 FEET.
HIGHEST WATER LEVEL 146.74 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 231.07 BELOW LSD, SEP. 28, 1976.
RECORDS AVAILABLE 1970-77.

JAN. 3, 1977 196.10, MAR.30, 1977 190.03, JUNE20, 1977 197.79.

380530099551301. 22-24W-35DAC. J. S. OWENS. DRILLED, ARTESIAN STOCK WELL IN DAKOTA FORMATION. DEPTH 282 FEET, DIAMETER 6 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PLATE, TOP OF CASING, 2.0 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2312 FEET.
HIGHEST WATER LEVEL 107.10 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 193.80 BELOW LSD, AUG. 27, 1971.
RECORDS AVAILABLE 1970-77.

JAN. 3, 1977 153.70, MAR.30, 1977 156.60, JUNE20, 1977 159.06.

380351099461501. 23-22W-7DAA. FRED KORF. DRILLED, ARTESIAN OBSERVATION WELL IN DAKOTA FORMATION. DEPTH 482 FEET, DIAMETER 1.25 INCH. MEASURING POINT, TOP OF CASING, 1.3 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2239 FEET.
HIGHEST WATER LEVEL 81.45 BELOW LSD, JUNE 24, 1974,
LOWEST WATER LEVEL 127.07 BELOW LSD, SEP. 23, 1975.
RECORDS AVAILABLE 1972-77.

JAN. 3, 1977 96.33, MAR.30, 1977 94.72, JUNE20, 1977 100.70.

380504099504001. 23-23W-4AAD. N. H. BRISTOW. DRILLED, ARTESIAN IRRIGATION WELL IN DAKOTA FORMATION. DEPTH 282 FEET, DIAMETER 16 INCHES. MEASURING POINT, 3/4-INCH PLUG IN NORTHEAST CORNER OF PUMP BASE, 0.5 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2236 FEET.
HIGHEST WATER LEVEL 28.46 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 152.30 BELOW LSD, AUG. 21, 1972.
RECORDS AVAILABLE 1970-77.

JAN. 3, 1977 43.95, JUNE20, 1977 90.30.

380432099505701. 23-23W-4DCA. DARRELL W. HOAGLAND. DRILLED, ARTESIAN IRRIGATION WELL IN DAKOTA FORMATION. DEPTH 264 FEET, DIAMETER 16 INCHES. MEASURING POINT, 3/4-INCH PLUG IN NORTHEAST CORNER OF PUMP BASE, 0.8 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2236 FEET.
HIGHEST WATER LEVEL 26.02 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 133.85 BELOW LSD, AUG. 27, 1971.
RECORDS AVAILABLE 1970-77.

JAN. 3, 1977 52.22.

****** HODGEMAN COUNTY CONTINUED

380412099473001. 23-23W-12ABD, J. J. JARNAGIN, JR. DRILLED, ARTESIAN IRRIGATION WELL IN DAKOTA FORMATION. DEPTH 245 FEET, DIAMETER 16 INCHES. MEASURING POINT, FLAP IN SOUTHWEST CORNER OF PUMP BASE, 0.7 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2256 FEET.
HIGHEST WATER LEVEL 81.52 BELOW LSD, JAN. 26, 1971.
LOWEST WATER LEVEL 141.80 BELOW LSD, AUG. 27, 1971.
RECORDS AVAILABLE 1970-77.

JAN. 3, 1977 94.40.

380352099550501. 23-24W-11DAA. TRACY JONES. DRILLED, ARTESIAN STOCK WELL IN DAKOTA FORMATION. DEPTH 300 FEET, DIAMETER 6 INCHES. MEASURING POINT, HOLE IN PLATE, TOP OF CASING, 1.0 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2335 FEET.
HIGHEST WATER LEVEL 125.87 BELOW LSD, MAR. 21, 1973.
LOWEST WATER LEVEL 205.23 BELOW LSD, SEP. 25, 1974.
RECORDS AVAILABLE 1970-71, 1973-77.

JAN. 3, 1977 177.54, MAR.30, 1977 161.23, JUNE20, 1977 170.21.

380123099581401. 23-24W-28BCC. GEORGE HARMAN. DRILLED, ARTESIAN OBSERVATION WELL IN DAKOTA FORMATION. DEPTH 570 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF CASING, 3.2 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2481 FEET.
HIGHEST WATER LEVEL 195.80 BELOW LSD, OCT. 24, 1972.
LOWEST WATER LEVEL 230.43 BELOW LSD, OCT. 4, 1977.
RECORDS AVAILABLE 1972-77.

JAN. 3, 1977 226.40, MAR.30, 1977 225.21, JUNE20, 1977 227.44.

380207100031301. 23-25W-22DBB. ROY CARDER. DRILLED, WATER-TABLE IRRIGATION WELL IN THE DAKOTA FORMATION. DEPTH 575 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN SOUTH SIDE OF PUMP BASE, 0.8 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2522 FEET.
HIGHEST WATER LEVEL 233.20 BELOW LSD, MAY 24, 1973.
LOWEST WATER LEVEL 296.16 BELOW LSD, SEP. 20, 1976.
RECORDS AVAILABLE 1973-77.

JAN. 3, 1977 276.32.

380335100132701. 23-26W-7CCC. HARRY COHOON. DRILLED WATER-TABLE IRRIGATION WELL IN DAKOTA FORMATION. DEPTH 500 FEET. MEASURING POINT, PLUG SOUTHWEST SIDE PUMP BASE, 0.7 FOOT ABOVE LSD. @ = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 272.92 BELOW LSD, APR. 9, 1969,
LOWEST WATER LEVEL 330.20 BELOW LSD, JAN. 12, 1977.
RECORDS AVAILABLE 1968-77.

JAN.12, 1977 330.20, MAR. 3, 1977 314.30, JUNE 6, 1977 305.30, SEP.14, 1977 318.30.

375958099530101. 24-23W-6AAR. FRANK WOLF. DRILLED, ARTESIAN, IRRIGATION WELL IN THE DAKOTA FORMATION. DEPTH 517 FEET, DIAMETER 16 INCHES. MEASURING POINT, EDGE OF PIPE, SOUTH SIDE, 1.1 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2457 FEET.
HIGHEST WATER LEVEL 216.00 BELOW LSD, FEB. 21, 1973.
LOWEST WATER LEVEL 268.33 BELOW LSD, SEP. 28, 1976.
RECORDS AVAILABLE 1973-77.

JAN. 3, 1977 228.70, MAR.30, 1977 248.40, JUNE20, 1977 232.00.

375502100090801. 24-26W-35CBC.A. C. JAMES. DRILLED, WATER-TABLE STOCK WELL IN OGALLALA FORMATION. DIAMETER 5.5 INCHES, DEPTH 86 FEET. MEASURING POINT, TOP NORTH SIDE OF CASING, 0.60 FOOT ABOVE LSD.
@ = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2608.8 FEET.
HIGHEST WATER LEVEL 63.18 BELOW LSD, MAR. 27, 1975, JAN. 3, 1977.
LOWEST WATER LEVEL 67.30 BELOW LSD, JAN. 6, 1975.
RECORDS AVAILABLE 1954-77.

JAN. 3, 1977 63.18, MAR.30, 1977 63.41, JUNE20, 1977 63.36.

****** JACKSON COUNTY

393824095435701. 6-15E-27BAB. JACKSON COUNTY RURAL WATER DISTRICT 3. DRILLED, WATER-TABLE OBSERVATION WELL. DEPTH 123 FEET, DIAMETER 1.5 INCHES, MEASURING POINT, TOP OF CASING, 2.0 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 1135 FEET.
HIGHEST WATER LEVEL 76.22 BELOW LSD, MAR. 15, 1974,
LOWEST WATER LEVEL 80.60 BELOW LSD, SEP. 19, 1977.
RECORDS AVAILABLE 1972-77.

DEC.10, 1976 79.69, JUNE17, 1977 80.70, SEP.19, 1977 80.60.

****** JEFFERSON COUNTY

390347095352701. 11-16E-25CBA. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 39.5 FEET. MEASURING POINT, TOP OF PIPE, 0.5 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 873 FEET.
HIGHEST WATER LEVEL 18.50 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 26.90 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1966-77.

DEC. 9, 1976 26.90, JUNE17, 1977 25.98, SEP.19, 1977 23.24.

390453095311701. 11-17E-21ADA. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 48 FEET. MEASURING POINT, TOP OF PIPE, 1.60 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 865.2 FEET.
HIGHEST WATER LEVEL 11.88 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 23.62 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1966-77.

DEC. 9, 1976 23.62, JUNE17, 1977 23.50, SEP.19, 1977 18.50.

390407095310901. 11-17E-27BBC. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 42 FEET. MEASURING POINT, TOP OF PIPE, 2.50 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 860.1 FEET.
HIGHEST WATER LEVEL 12.15 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 20.40 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1966-77.

DEC. 9, 1976 20.40, JUNE17, 1977 19.00, SEP.19, 1977 15.54.

390617095255301. 11-18E-8DAC. K.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 49 FEET. MEASURING POINT, TOP OF PIPE, 1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 852 FEET.
HIGHEST WATER LEVEL 5.05 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 19.20 BELOW LSD, MAR. 14, 1967.
RECORDS AVAILABLE 1966-77.

DEC. 9, 1976 15.82, JUNE17, 1977 14.75, SEP.19, 1977 9.08.

390446095260901. 11-18E-20ACC. K.G[illegible]. AUGERED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 49 FEET. MEASURING POINT, TOP OF PIPE, 1.00 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 857.2 FEET.
HIGHEST WATER LEVEL 11.28 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 24.27 BELOW LSD, JUNE 17, 1977.
RECORDS AVAILABLE 1966-77.

DEC. 9, 1976 24.05, JUNE17, 1977 24.27, SEP.19, 1977 19.90.

390354095175201. 11-19E-27BCC. BUCK CREEK SCHOOL. BORED OBSERVATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE DIAMETER 2 TO 1.25 INCHES, DEPTH 57 FEET. MEASURING POINT, TOP OF PIPE, 1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 884.00 FEET.
HIGHEST WATER LEVEL 7.55 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 29.61 BELOW LSD, MAR. 14, 1967.
RECORDS AVAILABLE 1961-65, 1967-77.

DEC. 9, 1976 25.12, JUNE17, 1977 26.43, SEP.19, 1977 19.48.

****** JEFFERSON COUNTY CONTINUED

390334095195801. 11-19E-29CCA. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 71 FEET. MEASURING POINT, TOP OF CASING, 3.20 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 848 FEET.
HIGHEST WATER LEVEL 10.40 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 24.60 BELOW LSD, JUNE 17, 1977.
RECORDS AVAILABLE 1966-77.

DEC. 9, 1976 24.56, JUNE17, 1977 24.60, SEP.19, 1977 19.12.

****** JOHNSON COUNTY

390300094514301. 11-23E-33BDD. U.S.G.S. AND K.G.S. BORED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 1.25 INCHES, DEPTH 39 FEET. MEASURING POINT, TOP OF PIPE, 3.6 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 772.8 FEET.
HIGHEST WATER LEVEL 20.17 BELOW LSD, MAR. 29, 1962,
LOWEST WATER LEVEL 32.10 BELOW LSD, DEC. 9, 1976, JUNE 17, 1977.
RECORDS AVAILABLE 1961-77.

DEC. 9, 1976 32.10, JUNE17, 1977 32.10, SEP.19, 1977 29.60.

385906094585101. 12-22E-21CCC. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 2 INCHES, DEPTH 41 FEET. MEASURING POINT, TOP OF PIPE, 3.13 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 786 FEET.
HIGHEST WATER LEVEL 8.27 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 18.31 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1967-77.

DEC. 9, 1976 18.31, JUNE17, 1977 17.90, SEP.19, 1977 9.97.

385841094553401. 12-22E-25BCCB. U.S.G.S. BORED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 1.25 INCHES, DEPTH 33 FEET. MEASURING POINT, TOP OF PIPE, 1.8 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 780.2 FEET.
HIGHEST WATER LEVEL 14.69 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 28.95 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1961-77.

DEC. 9, 1976 28.95, JUNE17, 1977 28.20, SEP.19, 1977 25.20.

385853094594901. 12-22E-29BAD. K.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 5.5 INCHES, DEPTH 46 FEET. MEASURING POINT, TOP OF RECORDER FLOOR, 2.50 FEET ABOVE LSD. MEASURING POINT CHANGED TO TOP OF CASING NORTH SIDE, 2.4 FEET ABOVE LSD, JANUARY 19, 1972, AND RECORDER REMOVED.
ALTITUDE OF LAND SURFACE 791 FEET.
HIGHEST WATER LEVEL 8.32 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 21.67 BELOW LSD, MAY 30, 1967.
RECORDS AVAILABLE 1967-77.

DEC. 9, 1976 20.02, JUNE17, 1977 21.13, SEP.19, 1977 16.45.

****** KEARNY COUNTY

380344101071301. 23-35W-12CCC. E. S. WHITE. DRILLED, ARTESIAN IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 378 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN EAST SIDE OF PUMP BASE, 0.1 FOOT ABOVE LSD. G = MEASURED BY U.S.B.R. OR K.S.B.A.
ALTITUDE OF LAND SURFACE 3009.1 FEET.
HIGHEST WATER LEVEL 66.60 BELOW LSD, MAY 12, 1958,
LOWEST WATER LEVEL 128.78 BELOW LSD, JAN. 17, 1977.
RECORDS AVAILABLE 1958, 1961-77.

JAN.17, 1977 128.78, MAR.14, 1977 119.11.

380405101224601. 23-37W-9ADD. J. L. BURNETT. DRILLED, UNUSED WATER-TABLE DOMESTIC WELL IN OGALLALA FORMATION. DIAMETER 6 INCHES, DEPTH 215 FEET. MEASURING POINT, TOP OF CASING, 0.2 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 3288.42 FEET.
HIGHEST WATER LEVEL 199.67 BELOW LSD, FEB. 6, 1962,
LOWEST WATER LEVEL 216.41 BELOW LSD, JUNE 3, 1976.
RECORDS AVAILABLE 1940, 1961-77.

JAN.17, 1977 210.33, MAR.14, 1977 208.88, JUNE 9, 1977 211.88, SEP.21, 1977 213.10.

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            ******   KEARNY COUNTY           CONTINUED

385738101071302.     24-35W-13CCC2. ROBERT BLUNT. DRILLED. WATER-TABLE IRRIGATION WELL IN ALLUVIUM DEPOSITS. DEPTH
            50 FEET, DIAMETER 8 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 1.35 FEET ABOVE LSD.
            ALTITUDE OF LAND SURFACE 2940.7  FEET.
            HIGHEST WATER LEVEL    8.20 BELOW LSD, JAN. 26, 1966.
            LOWEST WATER LEVEL   19.12 BELOW LSD, SEP. 21, 1977.
            RECORDS AVAILABLE 1962-68, 1970-77.

            JAN.18, 1977    18.74, MAR.14, 1977    18.36, JUNE 9, 1977    17.31, SEP.21, 1977    19.12.


375454101075401.     25-35W-2BAA. DEAN GIGOT. DRILLED, WATER-TABLE OBSERVATION WELL. DEPTH 300 FEET, DIAMETER 2 IN-
            CHES. MEASURING POINT, TOP OF PIPE, 1.46 FEET ABOVE LSD. DESIGNATION CHANGED TO 25-35W-2BAA APRIL
            1977, WAS 25-35W-2BBB.
            ALTITUDE OF LAND SURFACE 2998    FEET.
            HIGHEST WATER LEVEL   71.54 BELOW LSD, APR.   , 1975, JUNE   , 1975.
            LOWEST WATER LEVEL   85.36 BELOW LSD, SEP. 21, 1977.
            RECORDS AVAILABLE 1975-77.

            JAN.25, 1977    78.60, MAR.14, 1977    79.92, JUNE 9, 1977    79.63, SEP.21, 1977    85.36.


375307101103901.     25-35W-17AAA. C. C. CATTLE CO., INC. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH    FEET, DIA-
            METER    INCHES. MEASURING POINT, HOLE IN NORTH SIDE OF PUMP BASE, AT LAND SURFACE.
            NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
            HIGHEST WATER LEVEL   56.60 BELOW LSD, APR. 24, 1975.
            LOWEST WATER LEVEL   75.51 BELOW LSD, SEP. 21, 1977.
            RECORDS AVAILABLE 1975-77.

            JAN.25, 1977    65.29, MAR.14, 1977    65.98, SEP.21, 1977    75.51.


375124101080201.     25-35W-26BAB. GEORGE H. TATE, III. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH    FEET, DIA-
            METER    INCHES. MEASURING POINT, HOLE IN NORTHEAST SIDE OF PUMP BASE, 0.6 FOOT ABOVE LSD.
            NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
            HIGHEST WATER LEVEL   74.31 BELOW LSD, JUNE  3, 1975.
            LOWEST WATER LEVEL   91.39 BELOW LSD, SEP. 21, 1977.
            RECORDS AVAILABLE 1975-77.

            JAN.25, 1977    84.91, MAR.14, 1977    84.62, JUNE 9, 1977    85.84, SEP.21, 1977    91.39.


375115101165801.     25-36W-28BBD. BARR & ROUNDS. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEIS-
            TOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 362 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN
            WEST SIDE OF PUMP BASE, 0.1 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
            ALTITUDE OF LAND SURFACE 3050    FEET.
            HIGHEST WATER LEVEL   56.55 BELOW LSD, APR. 27, 1970.
            LOWEST WATER LEVEL   71.60 BELOW LSD, JAN. 17, 1977.
            RECORDS AVAILABLE 1969-77.

            JAN.17, 1977    71.60, MAR.14, 1977    65.16, JUNE 9, 1977    66.44, SEP.21, 1977    69.98.


375305101215502.     25-37W-15ABA2. CARL MARQUARDT. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DEPTH 29 FEET
            DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 5.0 FEET ABOVE LSD. REPLACEMENT WELL FOR
            25-37W-15ABA.
            ALTITUDE OF LAND SURFACE 3050.5  FEET.
            HIGHEST WATER LEVEL    8.67 BELOW LSD, OCT.  2, 1969.
            LOWEST WATER LEVEL   12.46 BELOW LSD, JAN. 17, 1977.
            RECORDS AVAILABLE 1967-77.

            JAN.17, 1977    12.46, MAR.14, 1977    12.11, JUNE 9, 1977    11.04, SEP.21, 1977    11.25.


374919101154601.     26-36W-4BDA. KANS. MASONIC HOME. DRILLED, UNUSED WATER-TABLE OBSERVATION WELL IN UNDIF-
            FERENTIATED PLEISTOCENE DEPOSITS. DEPTH 148 FEET, DIAMETER 8 INCHES. MEASURING POINT, TOP OF 8-INCH
            PIPE, 2.0 FEET ABOVE LSD.
            ALTITUDE OF LAND SURFACE 3034    FEET.
            HIGHEST WATER LEVEL   55.86 BELOW LSD, MAY   2, 1966.
            LOWEST WATER LEVEL   72.82 BELOW LSD, SEP. 21, 1977.
            RECORDS AVAILABLE 1965-77.

            JAN.27, 1977    69.73, MAR.14, 1977    69.39, JUNE 9, 1977    69.74, SEP.21, 1977    72.82.
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****** KEARNY COUNTY CONTINUED

374716101131901. 26-36W-14ACD. V. B. TATE ET AL. DRILLED, UNUSED WATER-TABLE WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS. DEPTH 179 FEET, DIAMETER 3 INCHES. MEASURING POINT, TOP OF CASING, 3.3 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 3013 FEET.
HIGHEST WATER LEVEL 46.40 BELOW LSD, SEP. 22, 1961.
LOWEST WATER LEVEL 62.89 BELOW LSD, JAN. 27, 1977.
RECORDS AVAILABLE 1961-77.

JAN.27, 1977 62.89.

****** KINGMAN COUNTY

374309098232301. 27-10W-3DDD. UNKNOWN. UNUSED INDUSTRIAL WELL NEAR SAND PIT, DIAMETER 16 INCHES, DEPTH 170 FEET. MEASURING POINT, HOLE SOUTHEAST CORNER PUMP BASE,0.4 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1705 FEET.
HIGHEST WATER LEVEL 49.63 BELOW LSD, JUNE 27, 1974,
LOWEST WATER LEVEL 56.99 BELOW LSD, SEP. 19, 1975.
RECORDS AVAILABLE 1966-77.

DEC.27, 1976 51.24, MAR.22, 1977 51.60, JUNE13, 1977 51.72, SEP.28, 1977 51.51.

373422098063301. 28-7W-29CDD. LESLIE AND RALPH BROWN. DRILLED IRRIGATION WELL, DIAMETER 16 INCHES, DEPTH 80 FEET. MEASURING POINT, HOLE SOUTHEAST SIDE OF CASING, 0.5 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1601 FEET.
HIGHEST WATER LEVEL 26.61 BELOW LSD, MAR. 18, 1974,
LOWEST WATER LEVEL 38.20 BELOW LSD, OCT. 9, 1956.
RECORDS AVAILABLE 1955-56, 1964, 1969-77.

DEC.27, 1976 27.68, MAR.22, 1977 27.52, JUNE13, 1977 26.92, SEP.28, 1977 26.73.

372659097491801. 30-5W-12CCA. ROBERT LOWERY. DRILLED IRRIGATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 16 INCHES, DEPTH 63 FEET, MEASURING POINT, BASE OF PUMP ON NORTH SIDE, 1.44 FFET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1484 FEET.
HIGHEST WATER LEVEL 20.35 BELOW LSD, JUNE 24, 1975,
LOWEST WATER LEVEL 27.36 BELOW LSD, JUNE 23, 1972.
RECORDS AVAILABLE 1955, 1959-77.

DEC.27, 1976 21.88, MAR.22, 1977 22.92, JUNE13, 1977 22.41, SEP.28, 1977 22.03.

****** KIOWA COUNTY

374054099110101. 27-17W-21ACC. (19) C. WILLIAMSON. DRILLED, WATER-TABLE IRRIGATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 18 INCHES, DEPTH 85 FEET, MEASURING POINT, LOWER EDGE OF PUMP BASE, 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 24.35 BELOW LSD, DEC. 12, 1973,
LOWEST WATER LEVEL 38.98 BELOW LSD, JULY 11, 1941.
RECORDS AVAILABLE 1941, 1944-77.

DEC.20, 1976 30.16, MAR.29, 1977 30.19, JUNE16, 1977 30.49, SEP.29, 1977 30.40.

374201099135401. 27-18W-13AAA. KANSAS GEOL. SURVEY. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 66 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 2.3 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2152 FEET.
HIGHEST WATER LEVEL 15.62 BELOW LSD, MAY 9, 1974,
LOWEST WATER LEVEL 20.77 BELOW LSD, MAR. 29, 1977.
RECORDS AVAILABLE 1973-77.

DEC.20, 1976 20.45, MAR.29, 1977 20.77, JUNE16, 1977 19.99, SEP.29, 1977 20.49.

374117099193801. 27-18W-18DCD. GILBERT YOHN. DUG AND DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 75 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP OF CONCRETE CURB, SOUTH SIDE, 1.0 FOOT ABOVE LSD. NEW WELL BORED IN 1961 AT SAME LOCATION. NEW WELL IS AN UNUSED OBSERVATION WELL IN PLEISTOCENE DEPOSITS. NEW DEPTH 40 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 2.9 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 10.30 BELOW LSD, MAR. 15, 1974,
LOWEST WATER LEVEL 26.62 BELOW LSD, APR. 28, 1941.
RECORDS AVAILABLE 1940-77.

DEC.20, 1976 15.05, MAR.29, 1977 15.44, JUNE16, 1977 15.38, SEP.29, 1977 15.38.

****** KIOWA COUNTY CONTINUED

374001099282201. 27-20W-26ABD. GLENN BOWERS. DRILLED, WATER-TABLE IRRIGATION WELL IN DAKOTA FORMATION. DEPTH 95 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTHWEST CORNER OF PUMP BASE, 0.5 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2274 FEET.
HIGHEST WATER LEVEL 39.19 BELOW LSD, MAR. 24, 1975.
LOWEST WATER LEVEL 44.79 BELOW LSD, SEP. 28, 1972.
RECORDS AVAILABLE 1969, 1971-77.

DEC.20, 1976 40.67, JUNE16, 1977 40.00, SEP.20, 1977 41.32.

373723099224501. 28-19W-10ADB. PYLE-TAYLOR LAND CO. DRILLED, UNUSED, WATER-TABLE OBSERVATION WELL IN THE DAKOTA FORMATION. DEPTH 175 FEET, DIAMETER 4 INCHES. MEASURING POINT, 1.0 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 89.13 BELOW LSD, JULY 5, 1977.
LOWEST WATER LEVEL 89.62 BELOW LSD, SEP. 29, 1977.
RECORDS AVAILABLE 1977.

JULY 5, 1977 89.13, SEP.29, 1977 89.62.

373258099152101. 29-18W-2ACC. LAURENCE SCHWARM. DRILLED, UNUSED, WATER-TABLE OBSERVATION WELL IN THE DAKOTA FORMATION, DEPTH 188 FEET, DIAMETER 4 INCHES. MEASURING POINT, TOP OF CASING, 1.5 FEET ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 144.04 BELOW LSD, SEP. 29, 1977.
LOWEST WATER LEVEL 144.04 BELOW LSD, SEP. 29, 1977.
RECORDS AVAILABLE 1977.

SEP.29, 1977 144.04.

****** LABETTE COUNTY

372026095060702. 31-21E-15CCC2. K.G.S. DRILLED WATER-TABLE OBSERVATION WELL, DIAMETER 6.5 INCHES, DEPTH 17 FEET. MEASURING POINT, TOP SOUTH SIDE OF CASING AT LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 836.1 FEET.
HIGHEST WATER LEVEL 5.42 BELOW LSD, MAR. 20, 1973.
LOWEST WATER LEVEL 16.38 BELOW LSD, SEP. 25, 1968.
RECORDS AVAILABLE 1967-77.

DEC. 6, 1976 15.77, JUNE16, 1977 12.80, SEP.15, 1977 8.25.

****** LANE COUNTY

383314100225601. 17-28W-26ABB. BEN HARTMAN. DRILLED WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 140 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTH SIDE OF PUMP BASE, 0.3 FOOT ABLVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2735 FEET.
HIGHEST WATER LEVEL 85.63 BELOW LSD, APR. 7, 1964.
LOWEST WATER LEVEL 105.45 BELOW LSD, SEP. 9, 1976.
RECORDS AVAILABLE 1963-67, 1969-77.

JAN.17, 1977 100.50, MAR. 3, 1977 101.81, JUNE 6, 1977 101.91, SEP.14, 1977 101.30.

383433100353601. 17-30W-13CBB. F. L. BURMEISTER. DRILLED, UNUSED, WATER-TABLE WELL IN OGALLALA FORMATION. DIAMETER 6 INCHES, DEPTH 94 FEET. MEASURING POINT, TOP OF WEST SIDE OF CASING, 0.10 FOOT ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2846 FEET.
HIGHEST WATER LEVEL 80.55 BELOW LSD, APR. 7, 1964.
LOWEST WATER LEVEL 87.64 BELOW LSD, SEP. 14, 1977.
RECORDS AVAILABLE 1948, 1950-77.

JAN.18, 1977 87.09, MAR. 3, 1977 87.11, JUNE 6, 1977 87.44, SEP.14, 1977 87.64.

382857100154501. 18-27W-13CCC. C. H. MERRIWEATHER. DRILLED, UNUSED, WATER-TABLE WELL IN OGALLALA FORMATION. DIAMETER 6 INCHES, DEPTH 94 FEET. MEASURING POINT, TOP SOUTHEAST SIDE OF CASING, 0.60 FOOT ABOVE LSD 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2673.5 FEET.
HIGHEST WATER LEVEL 83.34 BELOW LSD, DEC. 9, 1969.
LOWEST WATER LEVEL 88.99 BELOW LSD, SEP. 19, 1958.
RECORDS AVAILABLE 1948, 1950-77.

MAR. 3, 1977 86.08, JUNE 6, 1977 85.94, SEP.14, 1977 86.02.

****** LANE COUNTY CONTINUED

383130100354301. 18-30W-2AAA. ROBERT CRAMER. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 130 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN SOUTHWEST CORNER OF PUMP BASE, 0.5 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2849 FEET.
HIGHEST WATER LEVEL 75.06 BELOW LSD, MAR. 5, 1973,
LOWEST WATER LEVEL 89.12 BELOW LSD, SEP. 9, 1976.
RECORDS AVAILABLE 1971-77.

JAN.18, 1977 83.21, JUNE 6, 1977 83.64.

****** LEAVENWORTH COUNTY

385932094584301. 12-22E-21BCD. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 40 FEET. MEASURING POINT, TOP OF PIPE, 2.00 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 793 FEET.
HIGHEST WATER LEVEL 10.54 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 28.50 BELOW LSD, MAR. 12, 1975.
PECORDS AVAILABLE 1967-77.

DEC. 9, 1976 28.18, JUNE17, 1977 26.60, SEP.19, 1977 19.98.

385926094572001. 12-22E-22CAA. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 40 FEET. MEASURING POINT, TOP OF PIPF, 2.00 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 785 FEET.
HIGHEST WATER LEVEL 10.60 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 22.87 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1967-77.

DEC. 9, 1976 22.87, JUNE17, 1977 22.80, SEP.19, 1977 19.65.

****** LOGAN COUNTY

390737100522201. 11-32W-4ACD. W. G. HOCKERSMITH. DRILLFD, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 208 FEET. MEASURING POINT, TOP OF CASING, 5.10 FEET BELOW LSD. S = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3059 FEET.
HIGHEST WATER LEVEL 102.21 BELOW LSD, APR. 21, 1969,
LOWEST WATER LEVEL 114.05 BELOW LSD, MAR. 10, 1977.
RECORDS AVAILABLE 1968-77.

MAR.10, 1977 114.05, JUNE 8, 1977 107.68, SEP. 8, 1977 109.70.

390521100542901. 11-32W-19AAB. A. D. DEPPERSCHMIDT. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 180 FFET, DIAMETER INCHES. MEASURING POINT, HOLE IN PUMP BASE, NORTHWEST SIDE, 1.2 FFET ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 99.46 BELOW LSD, JAN. 7, 1976,
LOWEST WATER LEVEL 106.56 BELOW LSD, SEP. 17, 1975.
RECORDS AVAILABLE 1975-77.

JAN. 6, 1977 101.40, JUNE 8, 1977 102.42, SEP. 8, 1977 103.42.

390741101205902. 11-36W-6ADD2. (REPLACES WELL 11-36W-6ADD). U.S.G.S. DRILLED WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 220 FEET, DIAMETER 1.25 INCH. MEASURING POINT, TOP OF PIPE, 0.60 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3380 FEET.
HIGHEST WATER LEVEL 135.50 BELOW LSD, DEC. , 1965,
LOWEST WATER LEVEL 172.29 BELOW LSD, SEP. 15, 1976.
RECORDS AVAILABLE 1965-77.

JAN. 6, 1977 158.89, SEP. 8, 1977 168.14.

****** MCPHERSON COUNTY

383638097395501. 17-3W-4BBB. U.S.G.S. JETTED OBSERVATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DEPTH 31.6 FEET, DIAMETER 0.75 INCH. MEASURING POINT, TOP OF PIPE, 3.5 FEET ABOVF LSD. MEASURING POINT CHANGED TO 3.1 FEET ABOVE LSD, DECEMBER 28, 1961.
ALTITUDE OF LAND SURFACE 1317.8 FEET.
HIGHEST WATER LEVEL 9.43 BELOW LSD, JUNE 10, 1974,
LOWEST WATER LEVEL 20.25 BELOW LSD, SEP. 26, 1968.
RECORDS AVAILABLE 1950-53, 1955-77.

DEC. 7, 1976 17.08, JUNE14, 1977 17.50, SEP.12, 1977 14.80.

****** MCPHERSON COUNTY CONTINUED

383460097480301. 17-3W-17DDD. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DEPTH 37 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 0.8 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 1331.5 FEET.
HIGHEST WATER LEVEL 16.75 BELOW LSD, JULY 24, 1951.
LOWEST WATER LEVEL 29.80 BELOW LSD, SEP. 7, 1956.
RECORDS AVAILABLE 1946-53, 1955-77.

DEC. 7, 1976 26.37, JUNE14, 1977 25.82, SEP.12, 1977 24.35.

383210097442001. 17-4W-34AAA. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 1.25 INCHES, DEPTH 43 FEET. MEASURING POINT, TOP OF PIPE, 2.70 FEET ABOVE LSD.
MEASURING POINT CHANGED TO 3.0 FEET ABOVE LSD, MAY 16, 1972.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 14.62 BELOW LSD, JUNE 10, 1974.
LOWEST WATER LEVEL 26.47 BELOW LSD, SEP. 26, 1968.
RECORDS AVAILABLE 1965-77.

DEC. 7, 1976 25.10, JUNE14, 1977 23.33, SEP.12, 1977 21.16.

383514097552401. 17-5W-7CBB. U.S.G.S. JETTED, OBSERVATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DEPTH 30 FEET, DIAMETER 1.50 INCHES. MEASURING POINT, TOP OF PIPE, 3.0 FEET ABOVE LSD. REPLACEMENT WELL FOR 17-5W-7BBB.
ALTITUDE OF LAND SURFACE 1424 FEET.
HIGHEST WATER LEVEL 17.55 BELOW LSD, JUNE 2, 1976.
LOWEST WATER LEVEL 18.52 BELOW LSD, JUNE 14, 1977.
RECORDS AVAILABLE 1976-77.

DEC. 7, 1976 17.97, JUNE14, 1977 18.52, SEP.12, 1977 18.37.

383302097485401. 17-5W-25AAA. U.S.G.S. JETTED OBSERVATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 0.75 INCH, DEPTH 30 FEET. MEASURING POINT, TOP OF PIPE, 4.00 FEET ABOVE LSD. MP CHANGED TO 1.6 FEET ABOVE LSD, JUNE 12, 1973.
ALTITUDE OF LAND SURFACE 1378.3 FEET.
HIGHEST WATER LEVEL 5.20 BELOW LSD, JUNE 10, 1974.
LOWEST WATER LEVEL 20.90 BELOW LSD, OCT. 23, 1950.
RECORDS AVAILABLE 1950-77.

DEC. 7, 1976 15.35, JUNE14, 1977 16.05, SEP.12, 1977 15.88.

MEADE COUNTY

372452100153001. 30-27W-22CDD. D. ZORTMAN. DRILLED, UNUSED, WATER-TABLE WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 8 INCHES, DEPTH 20 FEET. MEASURING POINT, TOP OF CASING, 3.00 ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2518.0 FEET.
HIGHEST WATER LEVEL 4.90 BELOW LSD, MAR. 19, 1974.
LOWEST WATER LEVEL 17.68 BELOW LSD, SEP. 21, 1960.
RECORDS AVAILABLE 1954-77.

JAN.11, 1977 11.50, MAR.15, 1977 9.09, JUNE 8, 1977 8.32, SEP.15, 1977 9.98.

372307100171401. 30-27W-32DDD. MEADE COUNTY. DRIVEN AND BORED, WATER-TABLE OBSERVATION WELL IN PLIO-PLEIST SERIES. DEPTH 18 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP EAST SIDE OF PIPE, 2.0 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2475.0 FEET.
HIGHEST WATER LEVEL 4.68 BELOW LSD, JUNE 4, 1974.
DRY, WATER LEVEL NOT MEASUREABLE, SEP. 13, 1956, DEC. 4, 1956, MAR. 19, 1957, JUNE 18, 1957.
RECORDS AVAILABLE 1953-77.

MAR.15, 1977 9.77, JUNE 8, 1977 9.45, SEP.15, 1977 10.23.

372454100361701. 30-30W-28ABB. H. E. CHAPPELL. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 340 FEET, DIAMETER 16 INCHES. MEASURING POINT, CUT-OUT LOWER EDGE, EAST SIDE OF PUMP, 1.25 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2803 FEET.
HIGHEST WATER LEVEL 144.59 BELOW LSD, JAN. 6, 1959.
LOWEST WATER LEVEL 177.90 BELOW LSD, JAN. 12, 1977.
RECORDS AVAILABLE 1959, 1965-77.

JAN.12, 1977 177.90, MAR.15, 1977 166.18, JUNE 8, 1977 166.53, SEP.15, 1977 170.01.

371732100214701. 32-28W-4ADD. (77) J. W. WOOD. DRILLED, WATER-TABLE DOMESTIC AND STOCK WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 199 FEET, DIAMETER 3 INCHES. MEASURING POINT, BOTTOM OF T IN 3-INCH CASING, 2.6 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2546.0 FEET.
HIGHEST WATER LEVEL 60.18 BELOW LSD, MAR. 19, 1952.
LOWEST WATER LEVEL 72.90 BELOW LSD, SEP. 3, 1975.
RECORDS AVAILABLE 1939-77.

JAN.12, 1977 68.30, MAR.15, 1977 68.01, JUNE 8, 1977 68.23, SEP.15, 1977 70.86.

370853100234201. 33-28W-29BC. FRED BORCHERS. DRILLED, WATER-TABLE IRRIGATION WELL IN THE OGALLALA FORMATION. DEPTH 160 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP NORTHEAST SIDE OF CASING, 1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2371.3 FEET.
HIGHEST WATER LEVEL 13.10 BELOW LSD, JUNE 10, 1941, MAY 12, 1942.
LOWEST WATER LEVEL 19.99 BELOW LSD, SEP. 6, 1967, DEC. 16, 1974.
RECORDS AVAILABLE 1939-44, 1953-77.

JAN.12, 1977 16.90, JUNE 8, 1977 17.54, SEP.15, 1977 19.13.

370754100333501. 33-30W-35CB. COLUMBIAN FUEL CORP. DRILLED, ARTESIAN INDUSTRIAL WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 420 FEET, DIAMETER INCHES. MEASURING POINT, LOWER LIP OF 4-INCH COUPLING ON WEST SIDE, 0.70 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2684.3 FEET.
HIGHEST WATER LEVEL 157.18 BELOW LSD, JUNE 8, 1964.
LOWEST WATER LEVEL 165.48 BELOW LSD, JUNE 4, 1968.
RECORDS AVAILABLE 1959, 1961-68, 1970-77.

FEB.16, 1977 161.04, SEP.15, 1977 163.56.

MORTON COUNTY

371833101341501. 31-39W-33BCC. FRANK P. SHARMAN. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS, OGALLALA FORMATION AND UNDIFFERENTIATED MESOZOIC DEPOSITS. DEPTH 560 FEET, DIAMETER 16 INCHES. MEASURING POINT, LOWER EDGE SLANT PIPE, 1.0 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3253 FEET.
HIGHEST WATER LEVEL 160.57 BELOW LSD, JAN. 18, 1967.
LOWEST WATER LEVEL 202.48 BELOW LSD, SEP. 19, 1977.
RECORDS AVAILABLE 1967-77.

JAN.21, 1977 201.97, MAR. 7, 1977 202.44, JUNE21, 1977 200.57, SEP.19, 1977 202.48.

****** MORTON COUNTY CONTINUED

371945101412701. 31-40W-29ABB. CHAFFIN AND MORRELL. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 215 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 1.05 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3331.25 FEET.
HIGHEST WATER LEVEL 162.43 BELOW LSD, MAR. 2, 1959,
LOWEST WATER LEVEL 188.58 BELOW LSD, MAR. 7, 1977.
RECORDS AVAILABLE 1959, 1962-63, 1965-77.

FEB.17, 1977 180.16, MAR. 7, 1977 188.58G,JUNE21, 1977 180.42, SEP.19, 1977 181.31.

372043101572701. 31-43W-14DDC. (22) E. A. WILCOX. DRILLED, UNUSED, WATER-TABLE WELL IN THE LOWER CRETACEOUS SERIES. DEPTH 94 FEET, DIAMETER 5 INCHES. MEASURING POINT, TOP SOUTH SIDE OF CASING, 1.20 FEET ABOVE LSD. G = MEASURED BY K.S.B.A. MP CHANGED TO HOLE IN PLATE, NORTH SIDE, AT LAND SURFACE, JANUARY 1974.
ALTITUDE OF LAND SURFACE 3576 FEET.
HIGHEST WATER LEVEL 65.63 BELOW LSD, JAN. 20, 1969,
LOWEST WATER LEVEL 78.29 BELOW LSD, AUG. 14, 1958.
RECORDS AVAILABLE 1939-53, 1956-77.

JAN.21, 1977 67.35, MAR. 7, 1977 67.78, JUNE21, 1977 67.61, SEP.19, 1977 67.57.

371505101535601. 32-42W-21BCC. LEON AND HERBERT JACKSON. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS, OGALLALA FORMATION AND UNDIFFERENTIATED MESOZOIC DEPOSITS. DEPTH 190 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN SOUTHWEST SIDE OF PUMP BASE, 0.5 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3256 FEET.
HIGHEST WATER LEVEL 83.62 BELOW LSD, FEB. 18, 1960,
LOWEST WATER LEVEL 151.49 BELOW LSD, SEP. 19, 1977.
RECORDS AVAILABLE 1959-67, 1969-77.

JAN.13, 1977 144.45, SEP.19, 1977 151.49.

370835101394701. 33-40W-27CCC. RAY KALLENBACH. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 316 FEET, DIAMETER INCHES. MEASURING POINT, TOP OF CUT-OUT, NORTH SIDE OF PUMP, 0.6 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3308 FEET.
HIGHEST WATER LEVEL 80.15 BELOW LSD, JAN. 18, 1967,
LOWEST WATER LEVEL 90.28 BELOW LSD, DEC. 4, 1974.
RECORDS AVAILABLE 1967-77.

JAN.21, 1977 80.57, MAR. 7, 1977 81.64, SEP.19, 1977 83.70.

371242101452201. 33-41W-3AAD. WARREN HOWKER. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 305 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE UNDER SOUTH SIDE OF PUMP BASE, 0.8 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3425 FEET.
HIGHEST WATER LEVEL 111.20 BELOW LSD, MAR. 20, 1959,
LOWEST WATER LEVEL 164.77 BELOW LSD, JUNE 16, 1971.
RECORDS AVAILABLE 1959, 1965-77.

JAN.21, 1977 151.53, SEP.19, 1977 154.81.

370224101394601. 35-40W-3BBB. W. D. HERSHEY. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 385 FEET, DIAMETER 16 INCHES. MEASURING POINT, LOWER EDGE OF PUMP BASE, 0.7 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3366.6 FEET.
HIGHEST WATER LEVEL 172.52 BELOW LSD, JUNE 9, 1976,
LOWEST WATER LEVEL 183.75 BELOW LSD, JAN. 19, 1971.
RECORDS AVAILABLE 1959, 1962-63, 1965-77.

JAN.21, 1977 174.89, MAR. 7, 1977 177.24, JUNE21, 1977 175.53.

****** NEOSHO COUNTY

374100095244801. 27-18E-23BCC. U.S.G.S. BORED, WATER-TABLE OBSERVATION WELL, DIAMETER 1.25 INCHES, DEPTH 22 FEET. MEASURING POINT, TOP OF PIPE, 3.5 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 910.9 FEET.
HIGHEST WATER LEVEL 7.53 BELOW LSD, MAR. 20, 1973,
LOWEST WATER LEVEL 18.15 BELOW LSD, SEP. 22, 1970.
RECORDS AVAILABLE 1960, 1964-65, 1967-77.

DEC. 6, 1976 17.40, JUNE16, 1977 15.30, SEP.15, 1977 15.10.

****** NESS COUNTY

382632099411501. 18-21W-31CAA. GEORGE DIENER. DRILLED, UNUSED WATER-TABLE OBSERVATION WELL IN PLEISTOCENE AND FLUVIAL DEPOSITS. DEPTH 44 FEET, DIAMETER 5 INCHES. MEASURING POINT, TOP OF CASING, 0.3 FOOT ABOVE LSD. REPLACEMENT WELL FOR 18-21W-31BCB.
ALTITUDE OF LAND SURFACE 2122 FEET.
HIGHEST WATER LEVEL 30.69 BELOW LSD, MAR. 19, 1974,
LOWEST WATER LEVEL 34.55 BELOW LSD, OCT. 4, 1971.
RECORDS AVAILABLE 1971-77.

DEC.23, 1976 32.15, MAR.23, 1977 32.57, SEP.26, 1977 32.90.

382526099492301. 19-23W-1CCB. JAMES R. CLOUSTON. DRILLED, ARTESIAN, IRRIGATION WELL IN THE DAKOTA FORMATION. DEPTH 450 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTHWEST SIDE OF PUMP BASE, 0.9 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2214 FEET.
HIGHEST WATER LEVEL 75.50 BELOW LSD, MAY 12, 1971.
LOWEST WATER LEVEL 83.98 BELOW LSD, DEC. 23, 1976.
RECORDS AVAILABLE 1971-77.

DEC.23, 1976 83.98, JAN. 5, 1977 83.20.

382447099534801. 19-23W-8CBB. ROBERT SCHNEIPP. DRILLED, WATER-TABLE OBSERVATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 1.25 INCHES, DEPTH 52 FEET. MEASURING POINT, TOP OF PIPE, 3.2 FEET ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2220 FEET.
HIGHEST WATER LEVEL 18.59 BELOW LSD, JULY 27, 1967,
LOWEST WATER LEVEL 29.97 BELOW LSD, MAY 23, 1969.
RECORDS AVAILABLE 1965-77.

DEC.23, 1976 22.26, MAR.23, 1977 22.73, JUNE14, 1977 22.19, SEP.26, 1977 22.51.

381728099470701. 20-22W-20CCC. (2) C. L. WHITLEY. DUG AND DRILLED, WATER-TABLE IRRIGATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 20 INCHES, DEPTH 51 FEET. MEASURING POINT, TOP OF SOUTH SIDE OF CONDRETE CURB, 0.50 FOOT ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2189 FEET.
HIGHEST WATER LEVEL 17.81 BELOW LSD, JULY 12, 1951,
LOWEST WATER LEVEL 41.79 BELOW LSD, AUG. 17, 1965.
RECORDS AVAILABLE 1940-77.

DEC.23, 1976 37.89, MAR.23, 1977 37.93, JUNE14, 1977 40.38, SEP.26, 1977 39.64.

381550099532001. 20-23W-32CDA. (1) J. E. FICKEN. DRILLED, WATER-TABLE IRRIGATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 19 INCHES, DEPTH 67 FEET. MEASURING POINT, TOP EAST SIDE OF SILL UNDER PUMP, 2.00 FEET ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2233 FEET.
HIGHEST WATER LEVEL 25.50 BELOW LSD, OCT. 24, 1951,
LOWEST WATER LEVEL 41.50 BELOW LSD, MAY 25, 1967.
RECORDS AVAILABLE 1940-77.

DEC.23, 1976 37.91, MAR.23, 1977 38.13, JUNE14, 1977 38.20, SEP.26, 1977 38.49.

****** OSBORNE COUNTY

393038098374501. 6-12W-23CDC. C. FINK. DUG, WATER-TABLE DOMESTIC WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 36 INCHES, DEPTH 30 FEET. CRIBBED WITH ROCK. MEASURING POINT, TOP SOUTH SIDE OF BOARD PLATFORM, 0.75 FOOT ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1505.05 FEET.
HIGHEST WATER LEVEL 16.68 BELOW LSD, JULY 24, 1951,
LOWEST WATER LEVEL 27.17 BELOW LSD, APR. 26, 1946.
RECORDS AVAILABLE 1945-77.

DEC.14, 1976 26.85A,JUNE 9, 1977 25.28, SEP. 9, 1977 25.06.

392518098393601. 7-12W-28ABA. C. E. GALLEY. DRILLED, WATER-TABLE DOMESTIC AND STOCK WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 12 INCHES, DEPTH 46 FEET, TILE CASING. MEASURING POINT, TOP SURFACE OF CONCRETE PLATFORM, 0.50 FOOT ABOVE LSD. B = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 26.44 BELOW LSD, MAY 25, 1952,
LOWEST WATER LEVEL 35.62 BELOW LSD, SEP. 14, 1972.
RECORDS AVAILABLE 1946-77.

JUNE 9, 1977 33.43, SEP. 9, 1977 33.57.

****** OSBORNE COUNTY CONTINUED

392710099013302. 7-15W-8CCC2. U.S.B.R. DRILLED OBSERVATION WELL, DIAMETER 1.25 INCHES, DEPTH 28 FEET. MEASURING POINT, TOP OF PIPE, 2.0 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 16.62 BELOW LSD, SEP. 13, 1974,
LOWEST WATER LEVEL 21.83 BELOW LSD, MAR. 19, 1973.
RECORDS AVAILABLE 1966-77.

DEC. 1, 1976 19.59, JUNE 9, 1977 20.53, SEP. 9, 1977 19.0 .

392710098591901. 7-15W-10CCC. U.S.B.R. DRILLED OBSERVATION WELL, DIAMETER 1.25 INCHES, DEPTH 55 FEET. MEASURING POINT, TOP OF PIPE, 3.4 FEET ABOVE LSD. MEASURED BY U.S.B.R. MP CHANGED TO 4.2 FEET ABOVE LSD, JUNE 1973.
ALTITUDE OF LAND SURFACE 1647.20 FEET.
HIGHEST WATER LEVEL 16.39 BELOW LSD, MAR. 7, 1974,
LOWEST WATER LEVEL 22.90 BELOW LSD, AUG. 3, 1972.
RECORDS AVAILABLE 1964-77.

DEC. 1, 1976 17.39, JUNE 9, 1977 17.69, SEP. 9, 1977 17.72.

****** PAWNEE COUNTY

381047099185301. 21-18W-32DAA. SANFORD CO-OP. DRILLED, UNUSED WATER-TABLE DOMESTIC WELL IN ALLUVIUM. DIAMETER 5 INCHES, DEPTH 73 FEET. MEASURING POINT, HIGHEST PART OF CASING ON NORTHEAST SIDE, 0.40 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2056 FEET.
HIGHEST WATER LEVEL 15.88 BELOW LSD, MAR. 20, 1974,
LOWEST WATER LEVEL 28.70 BELOW LSD, MAR. 23, 1977.
RECORDS AVAILABLE 1963-77.

DEC.23, 1976 28.43, MAR.23, 1977 28.70, JUNE14, 1977 28.68, SEP.26, 1977 28.06.

381147099272701. 21-19W-30BCC. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 1.25 INCHES, DEPTH 69 FEET. MEASURING POINT, TOP OF PIPE, 3.6 FEET ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2087 FEET.
HIGHEST WATER LEVEL 31.13 BELOW LSD, APR. 9, 1965,
LOWEST WATER LEVEL 43.14 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1965-77.

DEC.23, 1976 41.88, MAR.23, 1977 41.95, JUNE14, 1977 42.23, SEP.26, 1977 43.14.

381207099325201. 21-20W-29BBB. E. R. MUSIL. DRILLED, UNUSED, WATER-TABLE IRRIGATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 16 INCHES, DEPTH 117 FEET. MEASURING POINT, TOP OF CONCRETE, 0.73 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2105 FEET.
HIGHEST WATER LEVEL 31.85 BELOW LSD, MAR. 16, 1966,
LOWEST WATER LEVEL 43.83 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1965-77.

DEC.23, 1976 42.84, MAR.23, 1977 41.49, JUNE14, 1977 42.59, SEP.26, 1977 43.83.

381022098570001. 22-15W-3AAA. KANSAS GEOL. SURVEY. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 51 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 0.9 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 1970 FEET.
HIGHEST WATER LEVEL 14.84 BELOW LSD, DEC. 18, 1973,
LOWEST WATER LEVEL 21.34 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1973-77.

DEC.23, 1976 20.47, MAR.23, 1977 20.44, JUNE14, 1977 20.78, SEP.26, 1977 21.34.

381022098570002. 22-15W-3AAA2. KANSAS GEOL. SURVEY. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 196 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 0.76 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 1970 FEET.
HIGHEST WATER LEVEL 15.47 BELOW LSD, OCT. 30, 1973,
LOWEST WATER LEVEL 29.49 BELOW LSD, JUNE 22, 1976.
RECORDS AVAILABLE 1973-77.

DEC.23, 1976 21.82, MAR.23, 1977 21.79, JUNE14, 1977 22.15, SEP.26, 1977 23.13.

****** PAWNEE COUNTY CONTINUED

381021099074601. 22-16W-6BBA. (8A) FRED B. REED. BORED. WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 1.25 INCHES. DEPTH 30 FEET. MEASURING POINT, TOP OF PIPE, 4.70 FEET ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2010 FEET.
HIGHEST WATER LEVEL 14.60 BELOW LSD, DEC. 20, 1973.
LOWEST WATER LEVEL 18.17 BELOW LSD, SEP. 15, 1964.
RECORDS AVAILABLE 1961-77.

DEC.23, 1976 17.05, MAR.23, 1977 17.27, JUNE14, 1977 17.42, SEP.26, 1977 17.27.

380744099023201. 22-16W-23AAA. EDGAR CLARK. DRILLED, WATER-TABLE IRRIGATION WELL, DIAMETER 19 INCHES, DEPTH 60 FEET. MEASURING POINT, HOLE IN PUMP BASE, 0.2 FOOT ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2011.1 FEET.
HIGHEST WATER LEVEL 21.19 BELOW LSD, JUNE 25, 1974.
LOWEST WATER LEVEL 28.51 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1970-77.

DEC.23, 1976 27.75, MAR.23, 1977 27.89, JUNE14, 1977 28.05, SEP.26, 1977 28.51.

380830099133401. 22-17W-18AAD. (7A) RALPH LUPFER. DRILLED, WATER-TABLE IRRIGATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 16 INCHES. DEPTH 122 FEET. MEASURING POINT, TOP OF 1.25 INCH PIPE, 1.00 FOOT ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2047 FEET.
HIGHEST WATER LEVEL 24.80 BELOW LSD, MAR. 28, 1974.
LOWEST WATER LEVEL 42.58 BELOW LSD, AUG. 21, 1969.
RECORDS AVAILABLE 1964-77.

DEC.23, 1976 34.73, MAR.23, 1977 35.74, JUNE14, 1977 38.91, SEP.26, 1977 39.40.

380930099263001. 22-19W-7AAA. RAYMOND POLSON. DRILLED. WATER-TABLE OBSERVATION WELL IN THE DAKOTA SANDSTONE. DEPTH 165 FEET, DIAMETER 1.50 INCHES. MEASURING POINT, TOP OF PIPE, 2.0 FEET ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 60.18 BELOW LSD, JUNE 14, 1977.
LOWEST WATER LEVEL 67.59 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1977.

JUNE14, 1977 60.18, SEP.26, 1977 67.59.

380929099241101. 22-19W-10BBB. DALE R. JOSEFIAK. DRILLED, ARTESIAN IRRIGATION WELL IN ALLUVIUM, DEPTH 130 FEET. DIAMETER 16 INCHES. MEASURING POINT, HOLE IN EAST SIDE OF PUMP BASE, 0.6 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2087 FEET.
HIGHEST WATER LEVEL 34.36 BELOW LSD, MAR. 28, 1974.
LOWEST WATER LEVEL 52.03 BELOW LSD, SEP. 17, 1974.
RECORDS AVAILABLE 1971-77.

DEC.23, 1976 50.94, MAR.23, 1977 49.41.

375958099032001. 23-16W-35CCD. WILLIAM J. SCHARTZ. DRILLED, ABANDONED WATER-TABLE STOCK WELL. DEPTH 58 FFET. DIAMETER 5 INCHES. MEASURING POINT, TOP OF CASING, 0.9 FOOT ABOVE LSD. MEASURING POINT CHANGED TO LAND SURFACE, DECEMBER 1976.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 11.97 BELOW LSD, MAR. 20, 1974.
LOWEST WATER LEVEL 19.23 BELOW LSD, JUNE 14, 1977.
RECORDS AVAILABLE 1972-77.

DEC.23, 1976 18.57, MAR.23, 1977 18.59, JUNE14, 1977 19.23, SEP.30, 1977 18.70.

380123099174801. 23-18W-28DAD. KANSAS GEOL. SURVEY. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 50 FEET. DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 2.0 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2102 FEET.
HIGHEST WATER LEVEL 6.32 BELOW LSD, NOV. 1, 1973.
LOWEST WATER LEVEL 9.76 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1973, 1975-77.

DEC.21, 1976 9.47, MAR.30, 1977 9.54, JUNE14, 1977 9.64, SEP.26, 1977 9.76.

****** POTTAWATOMIE COUNTY

391510096140801. 9-11E-19CDB. PEDICORD LAND AND CATTLE COMPANY. DRILLED, WATER-TABLE IRRIGATION WELL IN THE NEWMAN TERRACE DEPOSITS. DEPTH FEET, DIAMETER 24 INCHES. MEASURING POINT, HOLE, SOUTH SIDE UNDER PUMP BASE, 2.2 FEET ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 24.50 BELOW LSD, FEB. 13, 1974,
LOWEST WATER LEVEL 33.00 BELOW LSD, JUNE 13, 1977.
RECORDS AVAILABLE 1974-77.

DEC. 8, 1976 32.24, JUNE13, 1977 33.00, SEP. 6, 1977 32.00.

391417096103601. 9-11E-27CDA. N. T. LAWSON. DRILLED, WATER-TABLE IRRIGATION WELL IN THE NEWMAN TERRACE DEPOSITS. DEPTH 65 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN SOUTHWEST SIDE OF PUMP BASE, AT LAND SURFACE.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 13.37 BELOW LSD, JUNE 20, 1974,
LOWEST WATER LEVEL 27.39 BELOW LSD, DEC. 8, 1976.
RECORDS AVAILABLE 1974-77.

DEC. 8, 1976 27.39, JUNE13, 1977 26.98, SEP. 6, 1977 25.92.

391305096135201. 9-11E-31DCC. K.S.B.A. DRIVEN, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 0.75 INCH, DEPTH 26 FEET. MEASURING POINT, TOP OF PIPE, 3.20 FEET ABOVE LSD. MEASURING POINT CHANGED TO 0.9 FOOT ABOVE LSD, JUNE 18, 1971. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 961.65 FEET.
HIGHEST WATER LEVEL 9.95 BELOW LSD, DEC. 20, 1973,
LOWEST WATER LEVEL 17.62 BELOW LSD, JUNE 2, 1967, DEC. 8, 1976.
RECORDS AVAILABLE 1959-77.

DEC. 8, 1976 17.62, JUNE13, 1977 15.92, SEP. 6, 1977 14.57.

391331096120101. 9-11E-33BCD. MARTHA WILSON TRUST. DRILLED, WATER-TABLE IRRIGATION WELL IN THE NEWMAN TERRACE DEPOSITS. DEPTH 63 FEET, DIAMETER 24 INCHES. MEASURING POINT, HOLE IN PUMP BASE, NORTH SIDE, 0.5 FOOT ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 16.10 BELOW LSD, JUNE 20, 1974,
LOWEST WATER LEVEL 26.50 BELOW LSD, JUNE 13, 1977.
RECORDS AVAILABLE 1974-77.

DEC. 8, 1976 26.43, JUNE13, 1977 26.50, SEP. 6, 1977 26.00.

391305096085401. 9-11E-35DDD. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS. DIAMETER 2 INCHES, DEPTH 45 FEET. MEASURING POINT, TOP OF PIPE, 4.50 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 956 FEET.
HIGHEST WATER LEVEL 7.70 BELOW LSD, JUNE 20, 1974,
LOWEST WATER LEVEL 19.58 BELOW LSD, JUNE 13, 1977.
RECORDS AVAILABLE 1966-77.

DEC. 8, 1976 19.04, JUNE13, 1977 19.58, SEP. 6, 1977 18.57.

391142096285501. 10-8E-12CBB. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 41 FEET. MEASURING POINT, TOP OF PIPE, 4.00 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1002 FEET.
HIGHEST WATER LEVEL 6.55 BELOW LSD, DEC. 20, 1973,
LOWEST WATER LEVEL 17.80 BELOW LSD, MAR. 14, 1967.
RECORDS AVAILABLE 1966-77.

DEC. 8, 1976 16.91, JUNE15, 1977 16.24, SEP. 6, 1977 11.23.

391050096295201. 10-8E-14CBA. C. K. PROCESSING. DRILLED, WATER-TABLE IRRIGATION WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 18 INCHES, DEPTH 69 FEET. MEASURING POINT, LOWER EDGE OF CUTOUT IN PUMP FRAME, 1.50 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1008 FEET.
HIGHEST WATER LEVEL 14.75 BELOW LSD, DEC. 20, 1973,
LOWEST WATER LEVEL 24.75 BELOW LSD, MAY 16, 1967.
RECORDS AVAILABLE 1961-77.

DEC. 8, 1976 24.22, JUNE15, 1977 23.05, SEP. 6, 1977 19.30.

****** POTTAWATOMIE COUNTY CONTINUED

391134096171301. 10-10E-10DBC. CONRAD ERIKSEN. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM. DIAMETER 18 INCHES, DEPTH 67 FEET. MEASURING POINT, HOLE IN PUMP, 3.00 FEET ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 973 FEET.
HIGHEST WATER LEVEL 14.44 BELOW LSD, MAR. 22, 1973,
LOWEST WATER LEVEL 22.19 BELOW LSD, MAR. 14, 1967.
RECORDS AVAILABLE 1966-77.

DEC. 8, 1976 21.66, JUNE15, 1977 20.66, SEP. 6, 1977 17.15.

391246096105301. 10-11E-3BCA. K P + L. DRIVEN, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DEPTH 45.5 FEET, DIAMETER 2 INCHES, MEASURING POINT, TOP OF PIPE, 5.0 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 963 FEET.
HIGHEST WATER LEVEL 18.90 BELOW LSD, SEP. 6, 1977,
LOWEST WATER LEVEL 21.60 BELOW LSD, AUG. 11, 1977.
RECORDS AVAILABLE 1977.

AUG.11, 1977 21.60, SEP. 6, 1977 18.90.

391246096113501. 10-11E-4ACB. CARL RAY FULMER. DRILLED, WATER-TABLE IRRIGATION WELL IN THE NEWMAN TERRACE DEPOSITS. DEPTH 85 FEET, DIAMETER 24 INCHES. MEASURING POINT, TOP OF CASING, SOUTH SIDE, 0.5 FOOT ABOVE LSD. MP CHANGED TO TOP OF CONCRETE CASING, NORTH SIDE, 0.3 FOOT ABOVE LSD, IN 1974.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 22.88 BELOW LSD, FEB. 13, 1974,
LOWEST WATER LEVEL 29.03 BELOW LSD, SEP. 9, 1976.
RECORDS AVAILABLE 1967, 1974-77.

DEC. 8, 1976 28.75, JUNE13, 1977 27.70, SEP. 6, 1977 25.28.

391159096073701. 10-12E-7BBC. PESSEMIER FARM COMPANY. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM, DEPTH 84 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP BASE, WEST SIDE, 2.75 FEET ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 10.48 BELOW LSD, FEB. 13, 1974.
LOWEST WATER LEVEL 16.63 BELOW LSD, DEC. 8, 1976.
RECORDS AVAILABLE 1974-77.

DEC. 8, 1976 16.63, JUNE13, 1977 15.95, SEP. 6, 1977 14.13.

****** PRATT COUNTY

374427098372301. 26-12W-34CDC. KANSAS GEOLOGICAL SURVEY. DRILLED, UNUSED, WATER-TABLE OBSERVATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DEPTH 210 FFEET, DIAMFTER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 1.5 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 1883.6 FEET.
HIGHEST WATER LEVEL 43.16 BELOW LSD, DEC. 17, 1974,
LOWEST WATER LEVEL 46.56 BELOW LSD, JUNE 16, 1977.
RECORDS AVAILABLE 1964, 1973-77.

DEC.20, 1976 45.57, MAR.29, 1977 45.82, JUNE16, 1977 46.56, SEP.29, 1977 46.05.

374427098372302. 26-12W-34CDC2. KANSAS GEOLOGICAL SURVFY. DRILLFD, UNUSED, WATER-TABLE OBSERVATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DEPTH 145 FEET, DIAMFTER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 1.7 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 1884 FEET.
HIGHEST WATER LEVEL 41.06 BELOW LSD, DEC. 14, 1973,
LOWEST WATER LEVEL 44.89 BELOW LSD, JUNE 16, 1977.
RECORDS AVAILABLE 1964, 1973-77.

DEC.20, 1976 44.14, MAR.29, 1977 44.23, JUNE16, 1977 44.89, SEP.29, 1977 44.39.

374438098441601. 26-13W-34BCB. GEORGE SOAKEN. UNUSED, INDUSTRIAL WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 6 INCHES, DEPTH 75 FEET. MEASURING POINT, TOP OF CASING, 0.70 FOOT ABOVE LSD.
6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1949.6 FEET.
HIGHEST WATER LEVEL 41.63 BELOW LSD, JULY 18, 1960,
LOWEST WATER LEVEL 50.35 BELOW LSD, SEP. 28, 1972.
RECORDS AVAILABLE 1959-77.

DEC.20, 1976 46.40, MAR.29, 1977 46.10, JUNE16, 1977 46.86.

****** PRATT COUNTY CONTINUED

374648098522901. 26-14W-17DCB. DEAN E. HEMPHILL. DRILLED, WATER-TABLE IRRIGATION WELL IN CRETE AND GRAND ISLAND FORMATIONS. DEPTH 100 FEET, DIAMETER INCHES. MEASURING POINT, HOLE IN EAST SIDE OF PUMP BASE, 1.0 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 2015.6 FEET.
HIGHEST WATER LEVEL 12.00 BELOW LSD, MAY 11, 1960, NOV. 1, 1960.
LOWEST WATER LEVEL 23.40 BELOW LSD, SEP. 28, 1972.
RECORDS AVAILABLE 1960, 1962-63, 1965-77.

DEC.20, 1976 16.48, MAR.29, 1977 16.90.

374152098343101. 27-12W-13ADD. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 210 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.4 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 1844.2 FEET.
HIGHEST WATER LEVEL 73.40 BELOW LSD, JUNE 16, 1977.
LOWEST WATER LEVEL 81.06 BELOW LSD, MAR. 16, 1973.
RECORDS AVAILABLE 1964, 1970-77.

DEC.20, 1976 76.69, MAR.29, 1977 76.80, JUNE16, 1977 73.40, SEP.29, 1977 73.89.

374248098474101. 27-14W-12DDD. KANSAS GEOLOGICAL SURVEY. DRILLED, UNUSED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 158 FEET, DIAMETFR 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 2.5 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 1983 FEET.
HIGHEST WATER LEVEL 56.04 BELOW LSD, JUNE 23, 1975, JUNE 21, 1976.
LOWEST WATER LEVEL 58.11 BELOW LSD, AUG. 19, 1974.
RECORDS AVAILABLE 1974-77.

DEC.20, 1976 56.92, MAR.29, 1977 57.10, JUNE16, 1977 57.24.

373140098411701. 29-13W-13AAA. E. R. KESSLER. DRILLED, UNUSED IRRIGATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 10 INCHES, DEPTH 119 FEET. MEASURING POINT, TOP SOUTH SIDE OF CONCRETE PLATFORM, 0.40 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1916.7 FEET.
HIGHEST WATER LEVEL 87.65 BELOW LSD, JUNE 29, 1953.
LOWEST WATER LEVEL 92.25 BELOW LSD, DEC. 15, 1954.
RECORDS AVAILABLE 1951-77.

DEC.20, 1976 88.97, MAR.29, 1977 88.74, JUNE16, 1977 88.70, SEP.29, 1977 89.13.

****** RAWLINS COUNTY

394854101003101. 3-33W-3DCC. E. CORLEY. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM. DIAMETER 18 INCHES, DEPTH 68 FEET. MEASURING POINT, HOLE IN NORTH SIDE OF PUMP BASE, AT LAND SURFACE.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2823 FEET.
HIGHEST WATER LEVEL 20.38 BELOW LSD, OCT. 9, 1962.
LOWEST WATER LEVEL 31.20 BELOW LSD, SEP. 17, 1968.
RECORDS AVAILABLE 1959-77.

JAN. 5, 1977 26.47, JUNE 7, 1977 25.72, SEP. 7, 1977 30.90.

394711101233201. 3-36W-17CCC. C. K. FISHER. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 18 INCHES, DEPTH 300 FEET. MEASURING POINT, HOLE IN PUMP BASE, 0.50 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3375 FEET.
HIGHEST WATER LEVEL 195.20 BELOW LSD, MAR. 7, 1966.
LOWEST WATER LEVEL 230.96 BELOW LSD, SEP. 14, 1976.
RECORDS AVAILABLE 1962-77.

JAN. 5, 1977 205.38, JUNE 7, 1977 208.20, SEP. 7, 1977 217.81G.

394428101244001. 4-36W-6BBB. JOE C. WAHRMAN. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 295 FEET, DIAMETER INCHES. MEASURING POINT, HOLE IN PUMP BASE, SOUTHEAST SIDE, 0.6 FOOT ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 182.20 BELOW LSD, MAR. 11, 1975.
LOWEST WATER LEVEL 214.05 BELOW LSD, SEP. 14, 1976.
RECORDS AVAILABLE 1975-77.

JAN. 5, 1977 194.10, JUNE 7, 1977 190.87, SEP. 7, 1977 203.35G.

****** RAWLINS COUNTY CONTINUED

393533101030001. 5-33W-29BDA. MORTON BROTHERS. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 18 INCHES, DEPTH 115 FEET. MEASURING POINT, HOLE IN SOUTHEAST SIDE OF PUMP, 2.30 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 3042 FEET.
HIGHEST WATER LEVEL 16.59 BELOW LSD, APR. 11, 1966,
LOWEST WATER LEVEL 21.97 BELOW LSD, SEP. 16, 1975.
RECORDS AVAILABLE 1964-77.

JAN. 5, 1977 19.28, JUNE 7, 1977 18.35, SEP. 7, 1977 18.56.

****** RENO COUNTY

380601097592501. 22-6W-33BAB. CITY OF WILLOWBROOK. DRILLED, WATER-TABLE IRRIGATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 12 INCHES, DEPTH 44 FEET. MEASURING POINT, NORTH EDGE OF CASING, 0.75 FOOT ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1555 FEET.
HIGHEST WATER LEVEL 4.23 BELOW LSD, OCT. 5, 1973,
LOWEST WATER LEVEL 11.42 BELOW LSD, SEP. 24, 1976.
RECORDS AVAILABLE 1968-77.

DEC.22, 1976 11.28, MAR.21, 1977 11.39, JUNE17, 1977 10.93, SEP.27, 1977 9.16.

380008098011901. 23-6W-31DCB. BILL H. CLARK. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 95 FEET, DIAMETER INCHES. MEASURING POINT, HOLE WEST SIDE OF PUMP BASE, 0.2 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 31.37 BELOW LSD, JUNE 19, 1975,
LOWEST WATER LEVEL 33.53 BELOW LSD, SEP. 22, 1971.
RECORDS AVAILABLE 1971-77.

DEC.22, 1976 32.51, MAR.21, 1977 32.57, JUNE17, 1977 32.49, SEP.27, 1977 32.36.

380031098171801. 23-9W-35CCC. KANSAS GEOLOGICAL SURVEY. DRILLED, UNUSED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 82 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 1.0 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 1718 FEET.
HIGHEST WATER LEVEL 13.65 BELOW LSD, APR. 10, 1974,
LOWEST WATER LEVEL 25.63 BELOW LSD, MAR. 21, 1977.
RECORDS AVAILABLE 1974-77.

DEC.22, 1976 24.98, MAR.21, 1977 25.63, JUNE17, 1977 24.68, SEP.27, 1977 17.80.

374703098272401. 26-10W-18CDC. KANSAS GEOLOGICAL SURVEY. DRILLED, UNUSED, WATER-TABLE OBSERVATION WELL. DEPTH 84 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 2.5 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 1797 FEET.
HIGHEST WATER LEVEL 23.48 BELOW LSD, DEC. 11, 1974,
LOWEST WATER LEVEL 25.29 BELOW LSD, JUNE 13, 1977.
RECORDS AVAILABLE 1973-77.

DEC.22, 1976 24.33, MAR.22, 1977 24.97, JUNE13, 1977 25.29, SEP.28, 1977 24.66.

****** REPUBLIC COUNTY

395926097363101. 1-3W-1CCA. GERALD HUCKIN. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 210 FEET, DIAMETER INCHES. MEASURING POINT, HOLE IN BASE OF PUMP, 0.6 FOOT ABOVE LSD. REPLACES WELL 1-3W-5BCA.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 134.24 BELOW LSD, JUNE 17, 1975,
LOWEST WATER LEVEL 145.70 BELOW LSD, AUG. 22, 1972.
RECORDS AVAILABLE 1972, 1974-77.

DEC. 7, 1976 139.04, JUNE14, 1977 137.80, SEP.12, 1977 139.65.

****** RICE COUNTY

383058098194601. 18-9W-4BCC. NORTHERN GAS PRODUCTS. DRILLED OBSERVATION WELL, DIAMETER 1.25, DEPTH 194 FEET. MEASURING POINT, TOP OF PIPE, 2.65 FEET ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 50.47 BELOW LSD, SEP. 22, 1977,
LOWEST WATER LEVEL 80.35 BELOW LSD, AUG. 28, 1969.
RECORDS AVAILABLE 1966-77.

DEC.22, 1976 63.14, MAR.21, 1977 75.18, JUNE17, 1977 58.29, SEP.27, 1977 63.08.

****** RICE COUNTY CONTINUED

383058098194602. 18-9W-4BCC2. NORTHERN GAS PRODUCTS. DRILLED OBSERVATION WELL, DIAMETER 2 INCHES, DEPTH 97 FEET
MEASURING POINT, TOP OF PIPE, 2.5 FEET ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 49.17 BELOW LSD, OCT. 27, 1966,
LOWEST WATER LEVEL 60.10 BELOW LSD, DEC. 19, 1969.
RECORDS AVAILABLE 1966-77.

DEC.22, 1976 55.83, MAR.21, 1977 58.10, JUNE17, 1977 53.92, SEP.27, 1977 55.93.

382840098230601. 18-10W-24BBB. F. W. ROELF. DRILLED, WATER-TABLE STOCK WELL, DIAMETER 6 INCHES, DEPTH 144 FEET.
MEASURING POINT, HOLE SOUTH SIDE PUMP BASE, 0.4 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1754.0 FEET.
HIGHEST WATER LEVEL 31.89 BELOW LSD, JULY 5, 1945,
LOWEST WATER LEVEL 40.05 BELOW LSD, SEP. 25, 1968.
RECORDS AVAILABLE 1945, 1966-77.

DEC.22, 1976 36.00, MAR.21, 1977 36.19, JUNE17, 1977 35.90, SEP.27, 1977 36.60.

381918098152601. 20-9W-12DDA. DAVID C. GRIFFIN. DRIVEN DOMESTIC WELL IN ALLUVIUM, DIAMETER 1.50 INCHES, DEPTH 32
FEET. MEASURING POINT, TOP OF PIPE, 0.60 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 7.05 BELOW LSD, OCT. 5, 1973,
LOWEST WATER LEVEL 15.17 BELOW LSD, SEP. 25, 1968.
RECORDS AVAILABLE 1960-77.

DEC.22, 1976 13.73, MAR.21, 1977 13.65, JUNE17, 1977 13.05, SEP.27, 1977 11.15.

****** RILEY COUNTY

390841096380802. 10-7E-34BAA2. USDA SCS. DRILLED, WATER-TABLE IRRIGATION WELL IN NEWMAN TERRACE DEPOSITS OF
PLEISTOCENE AGE. DIAMETER 16 INCHES, DEPTH 48 FEET. MEASURING POINT, HOLE IN PUMP BASE 2.20 FEET
ABOVE LSD. G = MEASURED BY K.S.U. AND K.S.B.A.
ALTITUDE OF LAND SURFACE 1032 FEET.
HIGHEST WATER LEVEL 14.88 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 21.80 BELOW LSD, DEC. 8, 1976.
RECORDS AVAILABLE 1965-77.

DEC. 8, 1976 21.80, JUNE15, 1977 19.96, SEP.13, 1977 17.90.

390815096364901. 10-7E-35DBA. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS OF
PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 53 FEET. MEASURING POINT, TOP OF PIPE, 4.00 FEET ABOVE
LSD. G = MEASURED BY K.S.U. AND K.S.B.A.
ALTITUDE OF LAND SURFACE 1030 FEET.
HIGHEST WATER LEVEL 13.35 BELOW LSD, DEC. 20, 1973,
LOWEST WATER LEVEL 19.85 BELOW LSD, APR. 29, 1967.
RECORDS AVAILABLE 1966-77.

DEC. 8, 1976 19.61, JUNE15, 1977 18.80, SEP.13, 1977 15.90.

390938096294301. 10-8E-23CDC. WILFRID JOHNSON. DRILLED, WATER-TABLE IRRIGATION WELL IN NEWMAN TERRACE DEPOSITS
OF PLEISTOCENE AGE. DIAMETER 16 INCHES, DEPTH 87 FEET. MEASURING POINT, LOWER EDGE SLOPING PIPE,
1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.U.
ALTITUDE OF LAND SURFACE 1013 FEET.
HIGHEST WATER LEVEL 20.15 BELOW LSD, MAR. 22, 1973,
LOWEST WATER LEVEL 31.35 BELOW LSD, SEP. 9, 1976.
RECORDS AVAILABLE 1966-77.

DEC. 8, 1976 30.58, JUNE15, 1977 29.10, SEP.13, 1977 22.90.

391055096261701. 10-9E-17BDD. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 2 INCHES, DEPTH
37 FEET. MEASURING POINT, TOP OF PIPE, 3.00 FEET ABOVE LSD. G = MEASURED BY K.S.U. AND K.S.B.A.
ALTITUDE OF LAND SURFACE 998 FEET.
HIGHEST WATER LEVEL 9.90 BELOW LSD, JUNE 20, 1974,
LOWEST WATER LEVEL 25.44 BELOW LSD, MAR. 14, 1967.
RECORDS AVAILABLE 1966-77.

DEC. 8, 1976 18.59, JUNE15, 1977 19.38, SEP.13, 1977 17.72.

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****** RILEY COUNTY          CONTINUED

391023096274101.     10-9E-19BBA. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 2 INCHES, DEPTH
                   40 FEET. MEASURING POINT, TOP OF PIPE, 2.00 FEET ABOVE LSD. 6 = MEASURED BY K.S.U. AND K.S.B.A.
                   ALTITUDE OF LAND SURFACE 1001    FEET.
                   HIGHEST WATER LEVEL   12.10 BELOW LSD, MAR.  6, 1969,
                   LOWEST WATER LEVEL   23.38 BELOW LSD, DEC.  8, 1976.
                   RECORDS AVAILABLE 1966-77.

                   DEC. 8, 1976    23.38, JUNE15, 1977    21.96, SEP.13, 1977    16.55.


390729096364901.     11-7E-1BCC. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN BUCK CREEK TERRACE DEPOSITS OF
                   PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 39 FEET. MEASURING POINT, TOP OF PIPE, 3.00 FEET ABOVE
                   LSD. 6 = MEASURED BY K.S.U. AND K.S.B.A.
                   ALTITUDE OF LAND SURFACE 1035    FEET.
                   HIGHEST WATER LEVEL   13.76 BELOW LSD, DEC. 20, 1973,
                   LOWEST WATER LEVEL   24.10 BELOW LSD, OCT. 15, 1966, NOV. 23, 1966, JAN. 15, 1967, FEB. 17, 1967.
                   RECORDS AVAILABLE 1966-77.

                   DEC. 8, 1976    23.05, JUNE15, 1977    21.25, SEP.13, 1977    17.13.


                   ****** ROOKS COUNTY

392612099102501.     7-17W-24BBB. ROY BALLARD. DRILLED, WATER-TABLE STOCK WELL IN ALLUVIUM. DIAMETER 10 INCHES,
                   DEPTH 31 FEET. MEASURING POINT, TOP NORTHWEST SIDE OF CASING, 0.80 FOOT ABOVE LSD.
                   6 = MEASURED BY K.S.B.A.
                   ALTITUDE OF LAND SURFACE 1713.99 FEET.
                   HIGHEST WATER LEVEL   10.15 BELOW LSD, JUNE 14, 1961,
                   LOWEST WATER LEVEL   17.60 BELOW LSD, SEP.  9, 1977.
                   RECORDS AVAILABLE 1958-77.

                   DEC.14, 1976    16.13, JUNE 9, 1977    16.33C,SEP. 9, 1977    17.60.


392520099192201.     7-18W-27BBB. CITY OF PLAINVILLE. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 5
                   INCHES, DEPTH 28 FEET. MEASURING POINT, TOP OF PIPE, 1.00 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.A.
                   NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
                   HIGHEST WATER LEVEL   18.51 BELOW LSD, JUNE  6, 1974,
                   LOWEST WATER LEVEL   26.58 BELOW LSD, SEP.  9, 1977.
                   RECORDS AVAILABLE 1963-77.

                   DEC.14, 1976    24.61, JUNE 9, 1977    24.57, SEP. 9, 1977    26.58.


392533099243701.     7-19W-23CDB. ZACK MCEWEN. DUG STOCK WELL. DIAMETER 36 INCHES, DEPTH 22 FEET. MEASURING POINT,
                   SOUTH SIDE OF PUMP BASE, 0.30 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.A.
                   ALTITUDE OF LAND SURFACE 1878.50 FEET.
                   HIGHEST WATER LEVEL   13.16 BELOW LSD, JUNF 15, 1960,
                   LOWEST WATER LEVEL   19.32 BELOW LSD, DEC. 14, 1966.
                   RECORDS AVAILABLE 1958-77.

                   DEC.14, 1976    18.61, JUNE 9, 1977    16.01, SEP. 9, 1977    17.85.


                   ****** RUSH COUNTY

382914099104601.     18-17W-14BCC. LESTER DIRKS. DRILLED IRRIGATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DIAMETER 16
                   INCHES, DEPTH 71 FEET BELOW LSD. MEASURING POINT, HOLE IN NORTH SIDE PUMP BASE, 0.42 FOOT ABOVE LSD.
                   6 = MEASURED BY K.S.B.A.
                   ALTITUDE OF LAND SURFACE 1958    FEET.
                   HIGHEST WATER LEVEL   17.71 BELOW LSD, JAN. 17, 1962,
                   LOWEST WATER LEVEL   35.01 BELOW LSD, AUG. 26, 1966.
                   RECORDS AVAILABLE 1959-76.

                   DEC.23, 1976    33.26.

382848099104601.     18-17W-14CCC. U.S.G.S. AUGERED OBSERVATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DIAMETER 1.25
                   INCHES, DEPTH 64 FEET BELOW LSD. MEASURING POINT,  TOP OF PIPE, 3.86 FEET ABOVE LSD.
                   6 = MEASURED BY K.S.B.A.
                   ALTITUDE OF LAND SURFACE 1957    FEET.
                   HIGHEST WATER LEVEL   15.75 BELOW LSD, JUNE 20, 1960,
                   LOWEST WATER LEVEL   32.90 BELOW LSD, SEP. 27, 1976.
                   RECORDS AVAILABLE 1960-77.

                   DEC.23, 1976    31.58, MAR.23, 1977    30.32, JUNE14, 1977    29.71, SEP.26, 1977    31.60.
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****** RUSH COUNTY CONTINUED

382848099102901. 18-17W-14CDC, JERRY F. OBORNY. DRILLED IRRIGATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DIAMETER
16 INCHES, DEPTH 70 FEET BELOW LSD. MEASURING POINT, HOLE IN PUMP BASE, 0.73 FOOT ABOVE LSD.
B = MEASURED BY K.S.B.A. J = MEASURED BY OWNER.
ALTITUDE OF LAND SURFACE 1956 FEET.
HIGHEST WATER LEVEL 15.78 BELOW LSD, JUNE 27, 1960.
LOWEST WATER LEVEL 34.72 BELOW LSD, AUG. 31, 1956.
RECORDS AVAILABLE 1946-50, 1955-76.

DEC.23, 1976 31.03.

382908099105401. 18-17W-15DAA. U.S.G.S. AUGERED OBSERVATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DIAMETER 1.25
INCHES, DEPTH 60 FEET BELOW LSD. MEASURING POINT, TOP OF PIPE, 3.35 FEET ABOVE LSD.
B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1959 FEET.
HIGHEST WATER LEVEL 16.66 BELOW LSD, JUNE 20, 1960.
LOWEST WATER LEVEL 34.74 BELOW LSD, SEP. 24, 1968.
RECORDS AVAILABLE 1960-77.

DEC.23, 1976 29.47, MAR.23, 1977 29.76, JUNE14, 1977 29.88, SEP.26, 1977 30.78.

382835099105401. 18-17W-22AAD. U.S.G.S. AUGERED OBSERVATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DIAMETER 1.25
INCHES, DEPTH 51 FEET BELOW LSD. MEASURING POINT, TOP OF PIPE, 3.10 FEET ABOVE LSD UNTIL JUNE 1970
WHEN BECAME 1.90 FEET ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1958 FEET.
HIGHEST WATER LEVEL 16.31 BELOW LSD, JUNE 20, 1960.
LOWEST WATER LEVEL 33.40 BELOW LSD, SEP. 27, 1976.
RECORDS AVAILABLE 1960-77.

DEC.23, 1976 31.59, MAR.23, 1977 30.58, JUNE14, 1977 30.25, SEP.26, 1977 32.78.

382822099104601. 18-17W-23BCC. U.S.G.S. AUGERED OBSERVATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DIAMETER 1.25
INCHES, DEPTH 56 FEET BELOW LSD. MEASURING POINT, TOP OF PIPE, 3.55 FEET ABOVE LSD.
B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1958 FEET.
HIGHEST WATER LEVEL 16.15 BELOW LSD, JUNF 20, 1960.
LOWEST WATER LEVEL 31.58 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1960-77.

DEC.23, 1976 31.08, MAR.23, 1977 30.05, JUNE14, 1977 29.14, SEP.26, 1977 31.58.

382755099173201. 18-18W-22DDD. CITY OF LACROSSE. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM OF PLEISTO-
CENE AGE. DIAMETER 2 INCHES, DEPTH 73 FEET. MEASURING POINT, TOP OF PIPE, 2.60 FEET ABOVE LSD.
B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1995 FEET.
HIGHEST WATER LEVEL 22.88 BELOW LSD, MAR. 19, 1974.
LOWEST WATER LEVEL 35.96 BELOW LSD, OCT. 4, 1971.
RECORDS AVAILABLE 1965-76.

DEC.23, 1976 33.54.

382742099174001. 18-18W-27AAC. U.S.G.S. DRILLED OBSERVATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DIAMFTER 1.25
INCHES, DEPTH 53 FEET BELOW LSD. MEASURING POINT, TOP OF PIPE, 3.20 FFET ABOVE LSD.
B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1993 FEET.
HIGHEST WATER LEVEL 24.85 BELOW LSD, SEP. 21, 1970.
LOWEST WATER LEVEL 34.87 BELOW LSD, OCT. 4, 1971.
RECORDS AVAILABLE 1965-77.

DEC.23, 1976 32.10, MAR.23, 1977 32.20, JUNE14, 1977 32.26, SEP.26, 1977 32.94.

382710099183001. 18-18W-27CCB. FRANK OBORNY. DRILLED IRRIGATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DEPTH 67
FEET BELOW LSD. MEASURING POINT, HOLE IN PUMP BASE, 0.5 FOOT ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2000 FEET.
HIGHEST WATER LEVEL 21.01 BELOW LSD, MAY 25, 1960.
LOWEST WATER LEVEL 35.36 BELOW LSD, SEP. 9, 1976.
RECORDS AVAILABLE 1960-61, 1964-76.

DEC.23, 1976 31.49.

****** RUSH COUNTY CONTINUED

382821099262301. 18-19W-20ADD. RUSH COUNTY. LAND SURFACE ALTITUDE 2034.2 FEET. DEPTH FEET. DIAMETER 1.25 IN-
CHES. MEASURING POINT, TOP OF PIPE, 2.6 FEET ABOVE LSD. MEASURED BY U.S.G.S. FOR DIGITAL GROUND-
WATER MODEL WALNUT CREEK PROJECT. 8 = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 2034.2 FEET.
HIGHEST WATER LEVEL 22.04 BELOW LSD, MAR. 19, 1974.
LOWEST WATER LEVEL 33.51 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1969-77.

DEC.23, 1976 31.78, MAR.23, 1977 30.75, JUNE14, 1977 31.62, SEP.26, 1977 33.51.

382848099304201. 18-20W-14CCC. U.S.G.S. AUGERED OBSERVATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DIAMETER 1.25
INCHES, DEPTH 48 FEET BELOW LSD. MEASURING POINT, TOP OF PIPE, 3.70 FEET ABOVE LSD.
8 = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 2051 FEET.
HIGHEST WATER LEVEL 19.97 BELOW LSD, NOV. 7, 1968.
LOWEST WATER LEVEL 25.96 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1960-77.

DEC.23, 1976 25.81, MAR.23, 1977 25.13, JUNE14, 1977 25.46, SEP.26, 1977 25.96.

382815099341201. 18-20W-19DAA. V. HUXOL. DRILLED IRRIGATION WELL IN ALLUVIUM OF PLEISTOCENE AGE. DEPTH 58 FEET
BELOW LSD. MEASURING POINT, HOLE IN PUMP BASE, 1.0 FOOT ABOVE LSD. 8 = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 2077 FEET.
HIGHEST WATER LEVEL 25.12 BELOW LSD, MAR. 19, 1974.
LOWEST WATER LEVEL 35.00 BELOW LSD, APR. 20, 1965.
RECORDS AVAILABLE 1960, 1965-66, 1968-77.

DEC.23, 1976 30.58, MAR.23, 1977 30.94, JUNE14, 1977 30.04, SEP.26, 1977 33.05.

****** SALINE COUNTY

383959097353101. 16-2W-18BBB. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN TERRACE DEPOSITS OF PLEISTOCENE
AGE. DIAMETER 1.25 INCHES, DEPTH 40 FEET. MEASURING POINT, TOP OF PIPE, 2.70 FEET ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 15.05 BELOW LSD, MAR. 8, 1974.
LOWEST WATER LEVEL 25.60 BELOW LSD, JULY 18, 1966.
RECORDS AVAILABLE 1962-77.

DEC. 7, 1976 21.95, JUNE14, 1977 22.30, SEP.12, 1977 20.35.

383821097364501. 16-3W-23DDD. U.S.G.S. DRILLED OBSERVATION WELL. DIAMETER 1.25 INCHES, DEPTH 41 FEET. MEASURING
POINT, TOP OF PIPE, 3.5 FEET ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 8.90 BELOW LSD, DEC. 13, 1973.
LOWEST WATER LEVEL 19.68 BELOW LSD, MAR. 13, 1967.
RECORDS AVAILABLE 1965-77.

DEC. 7, 1976 18.78, JUNE14, 1977 17.80, SEP.12, 1977 16.69.

****** SCOTT COUNTY

383856101005901. 16-33W-19CBB. ROY FAIRLEIGH. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH
192 FEET, DIAMETER 18 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 0.75 FOOT ABOVE LSD.
8 = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 3097 FEET.
HIGHEST WATER LEVEL 129.70 BELOW LSD, DEC. 12, 1960.
LOWEST WATER LEVEL 169.31 BELOW LSD, DEC. 10, 1974.
RECORDS AVAILABLE 1959-77.

JAN.18, 1977 156.78, MAR.10, 1977 160.280,JUNE13, 1977 157.41.

383316100505801. 17-32W-27BBB. O. C. BEBERMEYER. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION.
DEPTH 185 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE NORTH SIDE PUMP BASE AT LAND SURFACE.
MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 2990 FEET.
HIGHEST WATER LEVEL 106.25 BELOW LSD, APR. 25, 1966.
LOWEST WATER LEVEL 133.99 BELOW LSD, SEP. 14, 1977.
RECORDS AVAILABLE 1965-77.

JAN.18, 1977 129.54, JUNE 6, 1977 130.76, SEP.14, 1977 133.99.

****** SCOTT COUNTY CONTINUED

383433101073401. 17-34W-6BCB. E. C. THOREN. DRILLED. WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 194 FEET. DIAMETER 16 INCHES. MEASURING POINT. HOLE IN WEST SIDE OF PUMP BASE. 0.75 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 3163 FEET.
HIGHEST WATER LEVEL 110.55 BELOW LSD. MAR. 29. 1966.
LOWEST WATER LEVEL 140.11 BELOW LSD. SEP. 26. 1977.
RECORDS AVAILABLE 1965-77.

JAN.18. 1977 135.22. MAR.10. 1977 136.59. JUNE13. 1977 136.48. SEP.26. 1977 140.11.

382947100522901. 18-32W-17ABA. ED PITTMAN. DRILLED. UNUSED. WATER-TABLE WELL IN OGALLALA FORMATION. DEPTH 108 FEET. DIAMETER 18 INCHES. MEASURING POINT. TOP OF 2-INCH NIPPLE ON WELL CAP. 1.5 FEET ABOVE LSD. REPLACEMENT WELL FOR 18-33W-12ADD.
ALTITUDE OF LAND SURFACE 2969.5 FEET.
HIGHEST WATER LEVEL 78.03 BELOW LSD. JAN. 26. 1965.
LOWEST WATER LEVEL 109.81 BELOW LSD. SEP. 9. 1976.
RECORDS AVAILABLE 1965-77.

JAN.18. 1977 99.87. MAR. 3. 1977 99.49. JUNE 6. 1977 102.33. SEP.14. 1977 106.79.

383046100594901. 18-33W-5CCC. M. C. BUEHLER. DRILLED. WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 119 FEET. DIAMETER 16 INCHES. MEASURING POINT. HOLE IN NORTH SIDE PUMP BASE. 0.3 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 3040.7 FEET.
HIGHEST WATER LEVEL 75.15 BELOW LSD. JUNE 16. 1944.
LOWEST WATER LEVEL 102.92 BELOW LSD. JAN. 18. 1977.
RECORDS AVAILABLE 1944. 1951. 1961. 1966-77.

JAN.18. 1977 102.92. MAR.10. 1977 93.09. JUNE13. 1977 93.24. SEP.26. 1977 93.55.

382730100553102. 18-33W-26DAD2. U. S. GEOL. SURVEY. DRILLED. WATER-TABLE OBSERVATION WELL IN QUATERNARY UNDIFFERENTIATED AND OGALLALA FORMATION. DEPTH 195 FEET. DIAMETER 1.25 INCHES. MEASURING POINT. TOP OF PIPE 2.0 FEET ABOVE LSD. REPLACEMENT WELL FOR 18-33W-26DAD.
ALTITUDE OF LAND SURFACE 2961.6 FEET.
HIGHEST WATER LEVEL 53.45 BELOW LSD. DEC. 27. 1971.
LOWEST WATER LEVEL 68.38 BELOW LSD. SEP. 27. 1977.
RECORDS AVAILABLE 1971-77.

JAN.21. 1977 67.27. FEB.18. 1977 67.80. MAR.14. 1977 67.48. JUNE14. 1977 66.02.
SEP.27. 1977 68.38.

382756101019201. 18-34W-25BBD. CLAUDE HUGHES. DRILLED. WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 142 FEET. DIAMETER 18 INCHES. MEASURING POINT. 1.30 FEET ABOVE LSD FROM SEPTEMBER 1940 TO APRIL 29. 1942. THEN 0.2 FOOT ABOVE LSD FROM NOVEMBER 19. 1942 TO APRIL 8. 1947. SINCE APRIL 23. 1951 MEASURING POINT HAS BEEN HOLE IN WEST SIDE OF PUMP BASE. AT LAND SURFACE. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3091.96 FEET.
HIGHEST WATER LEVEL 87.82 BELOW LSD. APR. 29. 1942.
LOWEST WATER LEVEL 114.86 BELOW LSD. JAN. 18. 1977.
RECORDS AVAILABLE 1940-47. 1951-52. 1956. 1961. 1965-77.

JAN.18. 1977 114.86. JUNE14. 1977 109.11. SEP.27. 1977 109.89.

382539100541601. 19-32W-6CCB. B. G. WITHAM. DRILLED. WATER-TABLE OBSERVATION WELL IN QUATERNARY UNDIFFERENTIATED AND OGALLALA FORMATION. DEPTH 115 FEET. DIAMETER 16 INCHES. MEASURING POINT. TOP OF PLATFORM. 2.65 FEET ABOVE LSD. REPLACEMENT FOR 18-33W-26DAD. MP CHANGED NOV. 7. 1972 TO TOP OF WELL CASING 1.42 FEET ABOVE LSD. THIS WELL IS A CONTINUOUS RECORDER. HOWEVER. ONLY A MONTHLY MEASUREMENT IS IN THIS FILE. BOARD OF AGRICULTURE HAS COMPLETE RECORD.
ALTITUDE OF LAND SURFACE 2937 FEET.
HIGHEST WATER LEVEL 37.56 BELOW LSD. JUNE 18. 1973.
LOWEST WATER LEVEL 57.92 BELOW LSD. AUG. 5. 1977.
RECORDS AVAILABLE 1972-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5. 1976	56.29	JAN. 18. 1977	52.96	APR. 5. 1977	56.22	JULY 5. 1977	56.35
NOV. 5	54.72	FEB. 25	52.47	MAY 5	55.58	AUG. 5	57.92
DEC. 5	53.77	MAR. 5	52.73	JUNE 5	54.63	SEP. 5	56.83

****** SCOTT COUNTY CONTINUED

382144100523501. 19-32W-32ACB. A. A. ALLEN. DRILLED, WATER-TABLE IRRIGATION WELL IN QUATERNARY UNDIFFERENTIATED AND OGALLALA FORMATION. DEPTH 210 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTHWEST CORNER OF PUMP BASE AT LAND SURFACE. REPLACEMENT WELL FOR 19-32W-28DCD.
ALTITUDE OF LAND SURFACE 2984 FEET.
HIGHEST WATER LEVEL 77.03 BELOW LSD, JAN. 11, 1973.
LOWEST WATER LEVEL 84.49 BELOW LSD, SEP. 14, 1977.
RECORDS AVAILABLE 1973-77.

JAN.17, 1977 83.19, MAR. 3, 1977 81.64, JUNE 6, 1977 83.62, SEP.14, 1977 84.49.

382401100565301. 19-33W-15DBD. OTTO GEESEKA. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 132 FEET, DIAMETER 18 INCHES. MEASURING POINT, TOP OF HOLE IN PUMP BASE, 1.5 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2963.5 FEET.
HIGHEST WATER LEVEL 45.60 BELOW LSD, AUG. , 1936,
LOWEST WATER LEVEL 110.16 BELOW LSD, SEP. 27, 1977.
RECORDS AVAILABLE 1936, 1940-47, 1951, 1956, 1961, 1965-77.

JAN.17, 1977 101.41, SEP.27, 1977 110.16.

382223100594602. 19-33W-29CBB2. SAMUEL BONTRAGER. DRILLED, WATER-TABLE IRRIGATION WELL IN QUATERNARY UNDIFFERENTIATED AND OGALLALA FORMATION. DEPTH 124 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP OF CASING, 0.3 FOOT ABOVE LSD. REPLACEMENT WELL FOR 19-33W-29CBB.
ALTITUDE OF LAND SURFACE 2994 FEET.
HIGHEST WATER LEVEL 113.23 BELOW LSD, JAN. 21, 1974,
LOWEST WATER LEVEL 125.68 BELOW LSD, JAN. 17, 1977.
RECORDS AVAILABLE 1971-77.

JAN.17, 1977 125.68, MAR.14, 1977 119.39, JUNE14, 1977 121.84, SEP.27, 1977 119.11.

381946100540601. 20-32W-7CBA. J. F. ROTHFELDER. DRILLED, UNUSED WATER-TABLE WELL IN QUATERNARY UNDIFFERENTIATED AND OGALLALA FORMATION. DIAMETER 16 INCHES. DEPTH 112 FEET. MEASURING POINT, HOLE IN DISC, 0.3 FOOT ABOVE LSD. REPLACEMENT WELL FOR 20-32W-7WAA. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2939 FEET.
HIGHEST WATER LEVEL 33.01 BELOW LSD, APR. 3, 1951,
LOWEST WATER LEVEL 77.16 BELOW LSD, SEP. 14, 1977.
RECORDS AVAILABLE 1951, 1970-77.

JAN.17, 1977 74.80, MAR. 3, 1977 76.11, JUNE 6, 1977 76.08, SEP.14, 1977 77.16.

382013100583901. 20-33W-9BBB. R. K. PETRO. DRILLED, UNUSED, WATFR-TABLE WELL IN OGALLALA FORMATION. DEPTH 128 FEET, DIAMETER 24 INCHES. MEASURING POINT, TOP OF CONCRETE BASE, 0.1 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. THIS WELL IS A CONTINUOUS RECORDER, HOWEVER, ONLY A MONTHLY MEASUREMENT IS IN THIS FILE. BOARD OF AGRICULTURE HAS COMPLETE RECORD.
ALTITUDE OF LAND SURFACE 2973.5 FEET.
HIGHEST WATER LEVEL 55.92 BELOW LSD, JUNE 5, 1932,
DRY, WATER LEVEL NOT MEASUREABLE, OCT. 6, 1955, NOV. 7, 1955, JAN. 12, 1956, FEB. 9, 1956, MAR. 22, 1956, NOV. 19, 1956, DEC. 17, 1956.
RECORDS AVAILABLE 1931-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1976	92.33	JAN. 5, 1977	92.61	APR. 5, 1977	92.90	JULY 5, 1977	93.10
NOV. 5	92.47	FEB. 25	92.80	MAY 5	92.97	AUG. 5	93.32
DEC. 5	92.51	MAR. 5	92.83	JUNE 5	93.04	SEP. 5	93.42

381822100575701. 20-33W-21ABD. MARION HUTCHINS. DRILLED, WATER-TABLE IRRIGATION WELL IN QUATERNARY UNDIFFERENTIATED AND OGALLALA FORMATION. DEPTH 154 FEET, DIAMETER 16 INCHFS. MEASURING POINT, HOLE IN EAST SIDE PUMP BASE, 0.2 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. MEASURING POINT CHANGED TO 0.3 FOOT ABOVE LSD, APRIL 7, 1976.
ALTITUDE OF LAND SURFACE 2956.8 FEET.
HIGHEST WATER LEVEL 47.07 BELOW LSD, JUNF 15, 1944,
LOWEST WATER LEVEL 118.58 BELOW LSD, SEP. 27, 1977.
RECORDS AVAILABLE 1944, 1965-77.

JAN.17, 1977 110.89, SEP.27, 1977 118.58.

****** SEDGWICK COUNTY

375039097234201. 25-1W-26DBD. (12) DR. A. D. UPDEGRAPH. DRILLED, UNUSED WATER-TABLE OBSERVATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DEPTH 54 FEET, DIAMETER 24 INCHES. MEASURING POINT, STEEL PLATE ON INSTRUMENT SHELF 2.99 FEET ABOVE LSD. MEASURING POINT CHANGED TO TOP OF CASING AT LAND SURFACE, JUNE 26, 1957.
ALTITUDE OF LAND SURFACE 1351.96 FEET.
HIGHEST WATER LEVEL 10.05 BELOW LSD, JULY 25, 1951,
LOWEST WATER LEVEL 22.60 BELOW LSD, NOV. 22, 1952.
RECORDS AVAILABLE 1937-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 1, 1976	18.05	JAN. 21, 1977	18.74	MAY 20, 1977	19.18	AUG. 19, 1977	17.08
OCT. 20	18.29	FEB. 18	19.86	JUNE 20	18.27	SEP. 20	16.39
NOV. 19	18.38	MAR. 21	18.98	JUNE 28	17.49	SEP. 28	16.46
DEC. 20	18.62	APR. 20	19.09				

374659097280201. 26-1W-19ABA. (805) CITY OF WICHITA. DRIVEN, WATER-TABLE OBSERVATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DEPTH 30 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.3 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1351.7 FEET.
HIGHEST WATER LEVEL 1.57 BELOW LSD, MAY 2, 1945,
LOWEST WATER LEVEL 9.91 BELOW LSD, SEP. 23, 1968.
RECORDS AVAILABLE 1938-77.

OCT. 1, 1976 7.55, DEC.28, 1976 7.60, MAR. 7, 1977 7.70, JUNE13, 1977 6.84,
JULY 1, 1977 6.48, SEP.28, 1977 5.99.

374837097320101. 26-2W-10BBA. (807) CITY OF WICHITA. DRIVEN, WATER-TABLE OBSERVATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DEPTH 37 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 1.0 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1392.11 FEET.
HIGHEST WATER LEVEL 17.97 BELOW LSD, JULY 1, 1957,
LOWEST WATER LEVEL 27.82 BELOW LSD, JUNE 29, 1977.
RECORDS AVAILABLE 1938-77.

OCT. 1, 1976 26.83, DEC.28, 1976 26.85, MAR. 7, 1977 26.93, JUNE13, 1977 25.60,
JUNE29, 1977 27.82, SEP.28, 1977 23.36.

374712097320001. 26-2W-15CBC. MISSOURI PACIFIC RAILROAD. DRILLED OBSERVATION WELL, DIAMETER 1.25 INCHES, DEPTH 63 FEET. MEASURING POINT, TOP OF PIPE, 2.83 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1379.80 FEET.
HIGHEST WATER LEVEL 14.16 BELOW LSD, MAY 15, 1961,
LOWEST WATER LEVEL 23.50 BELOW LSD, SEP. 28, 1977.
RECORDS AVAILABLE 1960-77.

DEC.27, 1976 22.99, MAR.22, 1977 22.98, JUNE13, 1977 23.07, SEP.28, 1977 23.50.

374652097311901. 26-2W-22ABA. AL STOLTZ. DRILLED IRRIGATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 6 INCHES, DEPTH 42 FEET. MEASURING POINT, BOTTOM INSIDE LIP OF ELBOW, 1.25 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 3.58 BELOW LSD, DEC. 19, 1960,
LOWEST WATER LEVEL 15.40 BELOW LSD, SEP. 28, 1977.
RECORDS AVAILABLE 1960-77.

DEC.27, 1976 14.71, MAR.22, 1977 14.50, JUNE13, 1977 14.60, SEP.28, 1977 15.40.

374007097232201. 27-1W-26DDD. U.S.G.S. AND K.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 6 INCHES, DEPTH 87 FEET. MEASURING POINT, HOLE IN RECORDER BASE, 2.00 FEET ABOVE LSD. DISCONTINUED NOVEMBER 1976.
ALTITUDE OF LAND SURFACE 1299.6 FEET.
HIGHEST WATER LEVEL 6.15 BELOW LSD, MAY 10, 1961,
LOWEST WATER LEVEL 13.12 BELOW LSD, OCT. 20, 1967.
RECORDS AVAILABLE 1959-76.

1976

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
5	......	......	......	......	......	......	......	......	......	10.72	......	......
10	......	......	......	......	......	......	......	......	......	10.77	10.87	......
15	......	......	......	......	......	......	......	......	......	10.81	10.88	......
20	......	......	......	......	......	......	......	......	......	10.84	......	......
25	......	......	......	......	......	......	......	......	......	10.84	......	......
EOM	......	......	......	......	......	......	......	......	......	10.85	......	......

373710097244201. 28-1W-15ACA. FLOYD HINCKLEY. DRILLED, ABANDONED STOCK WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 5 INCHES, DEPTH 38 FEET. MEASURING POINT, TOP OF CASING ON NORTH SIDE, 2.20 FEET ABOVE LSD. G = MEASURED BY K.S.B.A. MP CHANGED TO LAND SURFACE, OCTOBER 1974.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 25.10 BELOW LSD, SEP. 20, 1965,
LOWEST WATER LEVEL 29.55 BELOW LSD, DEC. 19, 1972.
RECORDS AVAILABLE 1964-77.

DEC.27, 1976 28.88, MAR.22, 1977 28.10, JUNE13, 1977 28.80, SEP.28, 1977 28.84.

****** SEDGWICK COUNTY CONTINUED

373426097222101. 28-1W-36ADC. GEORGE LIPKE. DRILLED IRRIGATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 18 INCHES, DEPTH 56 FEET. MEASURING POINT, HOLE IN SOUTH EDGE OF PUMP, 1.20 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 1330 FEET.
HIGHEST WATER LEVEL 0. ABOVE LSD, .. , 19 ,
LOWEST WATER LEVEL 32.37 BELOW LSD, JUNE 27, 1974.
RECORDS AVAILABLE 1959-77.

DEC.27, 1976 31.40, MAR.22, 1977 31.45, JUNE13, 1977 31.44.

****** SEWARD COUNTY

372159100432201. 31-31W-8BCC. J. A. FLEMING. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 400 FEET, DIAMETER 16 INCHES. MEASURING POINT, EDGE OF 0.75-INCH HOLE IN NORTHWEST CORNER OF PUMP HEAD BASE, 0.5 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2829.4 FEET.
HIGHEST WATER LEVEL 167.55 BELOW LSD, JUNE 12, 1962,
LOWEST WATER LEVEL 197.60 BELOW LSD, SEP. 15, 1977.
RECORDS AVAILABLE 1962-77.

JAN.11, 1977 192.50, JUNE 8, 1977 193.48, SEP.15, 1977 197.60.

371615100463701. 32-32W-14BRB. FRANK E. DUFIELD. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 420 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN SOUTHWEST CORNER PUMP BASE, 0.6 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2830.4 FEET.
HIGHEST WATER LEVEL 182.33 BELOW LSD, DEC. 11, 1964,
LOWEST WATER LEVEL 214.23 BELOW LSD, SEP. 15, 1977.
RECORDS AVAILABLE 1964-77.

JAN.11, 1977 211.15, SEP.15, 1977 214.23.

371444100555101. 32-33W-21CDB. (15) CABOT CARBON CO. DRILLED, WATER-TABLE DOMESTIC AND STOCK WELL IN ALLUVIUM. DIAMETER 5 INCHES, DEPTH 53 FEET. MEASURING POINT, TOP OF HOLE IN STEEL DISK, 0.20 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2696.6 FEET.
HIGHEST WATER LEVEL 15.76 BELOW LSD, AUG. 20, 1942,
LOWEST WATER LEVEL 20.06 BELOW LSD, MAR. 3, 1976.
RECORDS AVAILABLE 1940-65, 1967-77.

JAN.18, 1977 19.90, MAR.15, 1977 19.99, JUNE 8, 1977 18.99, SEP.15, 1977 19.87.

370602100572601. 34-33W-7CCB. KENNETH METCALF. DRILLED, WATER-TABLE IRRIGATION WELL IN PLIO-PLEIST SERIES. DEPTH 360 FEET, DIAMETER 24 INCHES. MEASURING POINT, TOP SOUTH EDGE OF CASING, 2.5 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2901.3 FEET.
HIGHEST WATER LEVEL 126.46 BELOW LSD, MAR. 5, 1975,
LOWEST WATER LEVEL 133.37 BELOW LSD, JAN. 22, 1971.
RECORDS AVAILABLE 1964-77.

JAN.12, 1977 128.07, MAR.15, 1977 128.78, JUNE 8, 1977 128.47, SEP.15, 1977 128.67.

370128101004001. 35-34W-10BRB. JOHN GROVER. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 352 FEET, DIAMETER 16 INCHES. MEASURING POINT, BOTTOM NORTH SIDE OF PUMP, 1.00 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2912 FEET.
HIGHEST WATER LEVEL 70.35 BELOW LSD, JAN. 15, 1974,
LOWEST WATER LEVEL 97.51 BELOW LSD, JULY 25, 1966.
RECORDS AVAILABLE 1954, 1964-77.

JUNE 8, 1977 78.93, SEP.15, 1977 75.16.

****** SHAWNEE COUNTY

390837096003001. 10-13E-31BAA. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 1.25 INCHES, DEPTH 33 FEET. MEASURING POINT, TOP OF PIPE, 1.75 FEET ABOVE LSD. MEASURED BY K.S.B.A. AND K.S.U.
ALTITUDE OF LAND SURFACE 929 FEET.
HIGHEST WATER LEVEL 9.70 BELOW LSD, DEC. 20, 1973,
LOWEST WATER LEVEL 19.34 BELOW LSD, AUG. 8, 1956.
RECORDS AVAILABLE 1952-56, 1959-77.

DEC.10, 1976 16.25, JUNE13, 1977 15.00, SEP. 6, 1977 14.45.

****** SHAWNEE COUNTY CONTINUED

390744095813401. 11-12E-1ABA. K.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 39 FEET. MEASURING POINT, TOP OF PIPE, 1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 926 FEET.
HIGHEST WATER LEVEL 8.63 BELOW LSD, DEC. 20, 1973.
LOWEST WATER LEVEL 16.18 BELOW LSD, MAR. 31, 1967.
RECORDS AVAILABLE 1966-77.

DEC.10, 1976 15.50, JUNE13, 1977 14.50, SEP. 6, 1977 13.29.

390559095485301. 11-14E-13BBB. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 48 FEET.MEASURING POINT, TOP OF PIPE, 2.00 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 903.6 FEET.
HIGHEST WATER LEVEL 8.60 BELOW LSD, JULY 29, 1969.
LOWEST WATER LEVEL 21.58 BELOW LSD, DEC. 10, 1976.
RECORDS AVAILABLE 1966-77.

DEC.10, 1976 21.58, JUNE13, 1977 21.07, SEP. 6, 1977 19.50.

390559095503301. 11-14E-15ABB. MERRING. BORED, OBSERVATION WELL IN ALLUVIUM AND DEPOSITS OF PLEISTOCENE AGE. DEPTH 50 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 2.8 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 908 FEET.
HIGHEST WATER LEVCL 20.45 BELOW LSD, SEP. 6, 1977.
LOWEST WATER LEVEL 23.20 BELOW LSD, FEB. 24, 1977.
RECORDS AVAILABLE 1977.

FEB.24, 1977 23.20, JUNE13, 1977 22.60, SEP. 6, 1977 20.45.

390534095542901. 11-14E-18CBB, K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES. DEPTH 44 FEET. MEASURING POINT, TOP OF PIPE, 4.00 FEET ABOVE LSD. RESET WELL JULY 16, 1968. DEPTH 44 FEET. MEASURING POINT 3.00 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 908 FEET.
HIGHEST WATER LEVEL 8.94 BELOW LSD, DEC. 20, 1973.
LOWEST WATER LEVEL 16.92 BELOW LSD, DEC. 10, 1976.
RECORDS AVAILABLE 1966-77.

DEC.10, 1976 16.92, JUNE13, 1977 15.98, SEP. 6, 1977 14.38.

390421095510601. 11-14E-22CCC. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 66 FEET. MEASURING POINT, TOP OF PIPE, 4.50 FFET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 897 FEET.
HIGHEST WATER LEVEL 8.58 BELOW LSD, MAR. 27, 1973.
LOWEST WATER LEVEL 16.66 BELOW LSD, SEP. 10, 1976.
RECORDS AVAILABLE 1966-77.

DEC.10, 1976 15.88, JUNE13, 1977 14.50, SEP. 6, 1977 12.87.

390507095485301. 11-14E-24BBB. K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES. DEPTH 38 FEET. MEASURING POINT, TOP OF PIPE, 2.00 FFET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 897.8 FEET.
HIGHEST WATER LEVEL 6.75 BELOW LSD, DEC. 20, 1973.
LOWEST WATER LEVEL 17.70 BELOW LSD, SEP. 10, 1976.
RECORDS AVAILABLE 1966-77.

DEC.10, 1976 17.65, JUNE13, 1977 15.70, SEP. 6, 1977 16.47.

390525095414301. 11-15E-13DBC. GOODYEAR TIRE CO. DRILLED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 2 INCHES, DEPTH 77 FEET. MEASURING POINT TOP OF 2 INCH COUPLING 1.50 FEET ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 888.71 FEET.
HIGHEST WATER LEVEL 29.96 BELOW LSD, DEC. 1, 1958.
LOWEST WATER LEVEL 38.16 BELOW LSD, JUNE 2, 1967.
RECORDS AVAILABLE 1958-77.

DEC. 9, 1976 36.42, JUNE13, 1977 37.65, SEP. 6, 1977 36.42.

****** SHAWNEE COUNTY CONTINUED

390545095423201. 11-15E-14ADB. HOWARD JACKSON. DRILLED, WATER-TABLE IRRIGATION WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 24 INCHES, DEPTH 50 FEET. MEASURING POINT, 1.5-INCH OPENING IN FLOOR IN NORTH SIDE OF PUMP AT LAND SURFACE. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 894.68 FEET.
HIGHEST WATER LEVEL 29.30 BELOW LSD, DEC. 16, 1933,
LOWEST WATER LEVEL 37.42 BELOW LSD, DEC. 29, 1972.
RECORDS AVAILABLE 1933, 1957, 1959-77.

DEC. 9, 1976 36.62, JUNE13, 1977 37.28, SEP. 6, 1977 36.43.

390519095445301. 11-15E-16DCA. (16C) K.B.A. D.W.R. DRILLED, WATER-TABLE OBSERVATION WELL IN NEWMAN TERRACE DEPOSITS OF PLEISTOCENE AGE. DIAMETER 18 INCHES. DEPTH 38 FEET. MEASURING POINT, TOP OF CASING, 0.80 FOOT ABOVE LSD. 6 = MEASURED BY OWNER. THIS IS A CONTINUOUS RECORDER, HOWEVER, ONLY A MONTHLY MEASUREMENT IS IN THIS FILE. BOARD OF AGRICULTURE HAS COMPLETE RECORD.
ALTITUDE OF LAND SURFACE 899.27 FEET.
HIGHEST WATER LEVEL 8.93 BELOW LSD, JULY 15, 1951,
LOWEST WATER LEVEL 34.60 BELOW LSD, SEP. 15, 1969.
RECORDS AVAILABLE 1950-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1976	27.35	JAN. 5, 1977	27.68	APR. 5, 1977	28.40	JULY 5, 1977	24.35
NOV. 5	27.47	FEB. 5	27.99	MAY 5	28.70	AUG. 5	24.40
DEC. 5	27.61	MAR. 5	28.16	JUNE 5	27.93	SEP. 5	24.06

390433095424002. 11-15E-23DBD. J. G. MEIER. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM. DIAMETER 18 INCHES, DEPTH 52 FEET. MEASURING POINT, HOLE IN PUMP, 1.60 FEET ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 888.60 FEET.
HIGHEST WATER LEVEL 20.40 BELOW LSD, DEC. 20, 1973,
LOWEST WATER LEVEL 28.65 BELOW LSD, JUNE 2, 1967.
RECORDS AVAILABLE 1959-77.

DEC. 9, 1976 27.72, JUNE13, 1977 27.25, SEP. 6, 1977 25.35.

390433095413401. 11-15E-24DBD. K.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 1.25 INCH, DEPTH 32 FEET. MEASURING POINT, TOP OF PIPE, 3.20 FEET ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 883.7 FEET.
HIGHEST WATER LEVEL 15.40 BELOW LSD, APR. 4, 1960,
LOWEST WATER LEVEL 23.32 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1958-77.

DEC. 9, 1976 23.32, JUNE13, 1977 22.60, SEP. 6, 1977 19.95.

390420095401101. 11-16E-19DDD. GIBSON BROS. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 1.25 INCH, DEPTH 50 FEET. MEASURING POINT, TOP OF PIPE, 1.80 FEET ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 884.21 FEET.
HIGHEST WATER LEVEL 20.70 BELOW LSD, DEC. 20, 1973,
LOWEST WATER LEVEL 28.94 BELOW LSD, JUNE 13, 1977.
RECORDS AVAILABLE 1962-77.

DEC. 9, 1976 28.62, JUNE13, 1977 28.94, SEP. 6, 1977 27.28.

390400095392101. 11-16E-29ACA. K.G.S. AUGERED, WATER TABLE OBSERVATION WELL IN ALLUVIUM. DIAMETER 2 INCHES, DEPTH 52 FEET. MEASURING POINT, TOP OF PIPE, 2.50 FEET ABOVE LSD. 8 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 880 FEET.
HIGHEST WATER LEVEL 15.80 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 25.85 BELOW LSD, DEC. 5, 1966.
RECORDS AVAILABLE 1966-77.

DEC. 9, 1976 25.20, JUNE13, 1977 24.25, SEP. 6, 1977 21.95.

****** SHERIDAN COUNTY

393216100371301. 6-30W-13BAA. JAMES EATHERLY. DRILLED, WATER-TABLE IRRIGATION WELL IN THE OGALLALA FORMATION. DEPTH 218 FEET, DIAMETER INCHES. MEASURING POINT, PIPE, SOUTHWEST SIDE, 2.0 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2875 FEET.
HIGHEST WATER LEVEL 122.97 BELOW LSD, MAR. 18, 1975,
LOWEST WATER LEVEL 135.78 BELOW LSD, SEP. 15, 1975.
RECORDS AVAILABLE 1975-77.

JAN. 5, 1977 125.49, JUNE 6, 1977 123.90, SEP. 6, 1977 127.44.

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392604100162101. 7-26W-19BBC. LLOYD E. HILLS. DRILLED, WATER-TABLE IRRIGATION WELL IN THE OGALLALA FORMATION. DEPTH 203 FEET, DIAMETER 10 INCHES. MEASURING POINT, HOLE IN PUMP BASE, SOUTHEAST SIDE, 1.0 FOOT ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 118.70 BELOW LSD, JUNE 17, 1975,
LOWEST WATER LEVEL 130.60 BELOW LSD, MAR. 18, 1975.
RECORDS AVAILABLE 1975-77.

JAN. 5, 1977 123.63, JUNE 6, 1977 120.27, SEP. 6, 1977 124.52.

392735100282501. 7-28W-8BDC. U.S.G.S. DRILLED, WATER-TABLE UNUSED WELL IN OGALLALA FORMATION. DIAMETER 1.25 INCHES, DEPTH 280 FEET. MEASURING POINT, TOP OF CASING, 1.00 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 2800 FEET.
HIGHEST WATER LEVEL 139.95 BELOW LSD, OCT. 1, 1968,
LOWEST WATER LEVEL 155.78 BELOW LSD, SEP. 6, 1977.
RECORDS AVAILABLE 1968-77.

JAN. 5, 1977 153.39, SEP. 6, 1977 155.78.

392433100330201. 7-29W-27CCC. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER INCHES, DEPTH 267 FEET. MEASURING POINT HOLE IN PUMP BASE SOUTHWEST SIDE 0.60 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 159.39 BELOW LSD, JUNE 7, 1976,
LOWEST WATER LEVEL 170.78 BELOW LSD, SEP. 13, 1976.
RECORDS AVAILABLE 1976-77.

JAN. 5, 1977 163.81, JUNE 6, 1977 162.57.

392124100364001. 8-30W-13DAA. U.S.G.S. DRILLED, WATER-TABLE UNUSED WELL IN OGALLALA FORMATION. DIAMETER 1.25 INCHES, DEPTH 254 FEET. MEASURING POINT, TOP OF CASING, 2.00 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2891.0 FEET.
HIGHEST WATER LEVEL 109.07 BELOW LSD, NOV. 2, 1964,
LOWEST WATER LEVEL 138.19 BELOW LSD, SEP. 6, 1977.
RECORDS AVAILABLE 1964-77.

JAN.17, 1977 128.15, JUNE 6, 1977 129.13, SEP. 6, 1977 138.19.

391401100384601. 9-30W-35BBB. A. G. BAALMAN. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 18 INCHES, DEPTH 220 FEET. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 0.58 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. MP CHANGED TO 0.3 FOOT ABOVE LSD, JANUARY 24, 1973.
ALTITUDE OF LAND SURFACE 2943.9 FEET.
HIGHEST WATER LEVEL 121.84 BELOW LSD, APR. 11, 1963,
LOWEST WATER LEVEL 148.35 BELOW LSD, SEP. 13, 1976.
RECORDS AVAILABLE 1962-77.

JAN.17, 1977 139.50, JUNE 6, 1977 140.80, SEP. 6, 1977 146.31.

391131100410801. 10-30W-8DDD. U.S.G.S. DRILLED, WATER-TABLE USUSED WELL IN OGALLALA FORMATION. DIAMETER 1.25 INCHES, DEPTH 184 FEET. MEASURING POINT, TOP OF PIPE, 3.00 FEET ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2930 FEET.
HIGHEST WATER LEVEL 92.50 BELOW LSD, MAR. 8, 1966,
LOWEST WATER LEVEL 103.57 BELOW LSD, SEP. 13, 1976.
RECORDS AVAILABLE 1964-77.

JAN.17, 1977 99.32, JUNE 6, 1977 99.10, SEP. 6, 1977 102.17.

****** SHERMAN COUNTY

393403101575901. 6-42W-2AAA. H. J. STEWART. DRILLED, WATER-TABLE UNUSED WELL IN OGALLALA FORMATION. DIAMETER 6 INCHES, DEPTH 225 FEET. MEASURING POINT, TOP OF CASING, 0.70 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3777.0 FEET.
HIGHEST WATER LEVEL 180.10 BELOW LSD, JULY 12, 1961,
LOWEST WATER LEVEL 205.00 BELOW LSD, SEP. 7, 1977.
RECORDS AVAILABLE 1959-77.

JAN.27, 1977 192.90, JUNE 7, 1977 191.71, SEP. 7, 1977 205.00C.

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392043101274601. 7-37W-4BBC. BERNIE BAIRD. DRILLED, WATER-TABLE IRRIGATION WELL IN THE OGALLALA FORMATION. DEPTH
275 FEET, DIAMETER INCHES. MEASURING POINT, HOLE IN PUMP BASE, SOUTHWEST SIDE, 0.3 FOOT ABOVE
LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 131.92 BELOW LSD, JUNE 25, 1975,
LOWEST WATER LEVEL 151.24 BELOW LSD, SEP. 8, 1977.
RECORDS AVAILABLE 1975-77.

JAN.27, 1977 136.50, JUNE 8, 1977 135.57, SEP. 8, 1977 151.24B.

392429101441801. 7-40W-36BAB. U.S.G.S. DRILLED, WATER-TABLE UNUSED WELL IN OGALLALA FORMATION. DIAMETER 1.25 INC
HES, DEPTH 321 FEET. MEASURING POINT, TOP OF PIPE 1.00 FOOT ABOVE LSD. B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3643 FEET.
HIGHEST WATER LEVEL 108.71 BELOW LSD, MAR. 7, 1966,
LOWEST WATER LEVEL 137.27 BELOW LSD, SEP. 15, 1976.
RECORDS AVAILABLE 1964-77.

JAN.28, 1977 129.05, JUNE 8, 1977 129.74, SEP. 8, 1977 135.40.

392757101531801. 7-41W-10BBA. JOHN H. GOLDEN. DRILLED, WATER-TABLE IRRIGATION WELL IN THE OGALLALA FORMATION.
DEPTH FEET, DIAMETER INCHES. MEASURING POINT, HOLE IN PUMP BASE, NORTHEAST SIDE, 1.5 FEET
ABOVE LSD.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 149.82 BELOW LSD, MAR. 12, 1975,
LOWEST WATER LEVEL 166.04 BELOW LSD, SEP. 14, 1976.
RECORDS AVAILABLE 1975-77.

JAN.28, 1977 156.05, JUNE 7, 1977 164.30.

392107101400701. 8-39W-15CCC. THOMAS CEBULA. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAME-
TER 18 INCHES, DEPTH 269 FEET. MEASURING POINT, HOLE IN WEST SIDE PUMP BASE, 1.30 FEET ABOVE LSD.
B = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3642.0 FEET.
HIGHEST WATER LEVEL 126.48 BELOW LSD, AUG. 4, 1949,
LOWEST WATER LEVEL 168.54 BELOW LSD, SEP. 8, 1977.
RECORDS AVAILABLE 1949, 1963-77.

JAN.20, 1977 156.88, JUNE 8, 1977 162.03, SEP. 8, 1977 168.54.

392310101450001. 8-40W-12DBA. M. G. HEVNER. WATER-TABLE UNUSED, WELL IN OGALLALA FORMATION. DIAMETER 16
INCHES, DEPTH 247 FEET. MEASURING POINT, HOLE IN RECORDER FLOOR, 0.60 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 3670 FEET.
HIGHEST WATER LEVEL 132.94 BELOW LSD, APR. 10, 1966,
LOWEST WATER LEVEL 171.00 BELOW LSD, SEP. 15, 1976.
RECORDS AVAILABLE 1965-77.

JAN.21, 1977 161.52, JUNE 8, 1977 168.09, SEP. 8, 1977 164.08.

392001101434601. 8-40W-25AAC. U.S.G.S. (REPLACES 8-40W-24AAA) UNUSED WATER-TABLE WELL IN OGALLALA FORMATION.
DIAMETER 2 INCHES, DEPTH 290 FEET. MEASURING POINT, FLOOR OF RECORDER HOUSE, 2.00 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 3701 FEET.
HIGHEST WATER LEVEL 157.22 BELOW LSD, APR. 20, 1968,
LOWEST WATER LEVEL 181.42 BELOW LSD, SEP. 8, 1977.
RECORDS AVAILABLE 1967-77.

DEC.16, 1976 180.90, JAN.21, 1977 180.35, MAR.18, 1977 179.64, JUNE 7, 1977 180.45,
SEP. 8, 1977 181.42.

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391828102024901. 8-42W-31DCD. U. S. GEOL. SURVEY. DRILLED. UNUSED WATER-TABLE WELL IN OGALLALA FORMATION. DEPTH 184 FEET. DIAMETER 1.25 INCHES. MEASURING POINT. TOP OF PIPE. 2.0 FEET ABOVE LSD. G = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 3872 FEET.
HIGHEST WATER LEVEL 57.30 BELOW LSD. OCT. 28. 1964.
LOWEST WATER LEVEL 74.79 BELOW LSD. JAN. 17. 1977.
RECORDS AVAILABLE 1964-77.

JAN.17. 1977 74.79. JUNE 7. 1977 73.10. SEP. 7. 1977 73.42.

391502101433001. 9-39W-19CCC. BILL COLE. DRILLED. WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 200 FEET. DIAMETER 16 INCHES. MEASURING POINT. HOLE IN PUMP BASE. SOUTH SIDE. 0.5 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 3695 FEET.
HIGHEST WATER LEVEL 119.57 BELOW LSD. MAR. 6. 1974.
LOWEST WATER LEVEL 157.82 BELOW LSD. SEP. 15. 1976.
RECORDS AVAILABLE 1972-77.

JAN.19. 1977 132.59. JUNE 8. 1977 130.40. SEP. 8. 1977 141.29.

391454101490901. 9-40W-29BBB. U.S.G.S. DRILLED. WATER-TABLE UNUSED WELL IN OGALLALA FORMATION. DIAMETER 1.25 INCHES. DEPTH 242 FEET. MEASURING POINT. TOP OF PIPE.2.50 FEET ABOVE LSD. G = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 3782 FEET.
HIGHEST WATER LEVEL 118.44 BELOW LSD. MAR. 9. 1965.
LOWEST WATER LEVEL 157.55 BELOW LSD. SEP. 15. 1976.
RECORDS AVAILABLE 1964-77.

JAN.18. 1977 144.33. JUNE 8. 1977 149.44. SEP. 8. 1977 157.53.

391730102012701. 9-42W-8AAA. U.S.G.S. DRILLED. WATER-TABLE UNUSED WELL IN OGALLALA FORMATION. DIAMETER 1.25 INCHES. DEPTH 262 FEET. MEASURING POINT. TOP OF PIPE. 3.00 FEET ABOVE LSD. G = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 3943 FEET.
HIGHEST WATER LEVEL 128.89 BELOW LSD. OCT. 28. 1964.
LOWEST WATER LEVEL 156.75 BELOW LSD. SEP. 14. 1976.
RECORDS AVAILABLE 1964-77.

JAN.17. 1977 152.70. JUNE 7. 1977 151.80. SEP. 7. 1977 156.58.

391638101580901. 9-42W-14AAA. U.S.G.S. DRILLED. WATER-TABLE UNUSED WELL IN OGALLALA FORMATION. DIAMETER 1.25 INCHES. DEPTH 278 FEET. MEASURING POINT. TOP OF PIPE.1.50 FEET ABOVE LSD.
G = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 3901 FEET.
HIGHEST WATER LEVEL 127.90 BELOW LSD. OCT. 28. 1964.
LOWEST WATER LEVEL 168.86 BELOW LSD. SEP. 14. 1976.
RECORDS AVAILABLE 1964-77.

JAN.18. 1977 161.98. JUNE 7. 1977 162.49. SEP. 7. 1977 166.73.

391310101501301. 10-40W-6BBB. R. W. TOWNSEND. DRILLED. WATER-TABLE UNUSED WELL IN OGALLALA FORMATION. DIAMETER 5 INCHES. DEPTH 170 FEET. MEASURING POINT. RECORDER FLOOR. 3.00 FEET ABOVE LSD. RECORDER REMOVED AUGUST 14. 1972. MEASURED QUARTERLY BY K.S.G.A. DESTROYED. JULY 1977.
ALTITUDE OF LAND SURFACE 3794.0 FEET.
HIGHEST WATER LEVEL 101.00 BELOW LSD. NOV. 10. 1965.
LOWEST WATER LEVEL 138.48 BELOW LSD. MAR. 17. 1976.
RECORDS AVAILABLE 1965-76.

NO MEASUREMENTS 1977 WATER YEAR.

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381120098434802. 21-13W-27DDD2. (19A) ARTHUR GATES. DRILLED. WATER-TABLE OBSERVATION WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 1.25 INCHES. DEPTH 25 FEET. MEASURING POINT. TOP OF PIPE. 3.10 FEET ABOVE LSD. G = MEASURED BY K.S.G.A.
ALTITUDE OF LAND SURFACE 1877.2 FEET.
HIGHEST WATER LEVEL 0.50 BELOW LSD. MAR. 14. 1974.
LOWEST WATER LEVEL 10.79 BELOW LSD. SEP. 15. 1964.
RECORDS AVAILABLE 1963-77.

DEC.23. 1976 5.19. MAR.21. 1977 4.81. JUNE14. 1977 4.87. SEP.26. 1977 5.50.

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380617098460101. 22-13W-29DAD. MRS. L. C. WALLS. BORED, WATER-TABLE OBSERVATION WELL IN OGALLALA FORMATION. DIAMETER 1.25 INCHES, DEPTH 30 FEET. MEASURING POINT, TOP OF PIPE, 2.47 FEET ABOVE LSD.
G = MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 5.16 BELOW LSD, DEC. 20, 1973, MAR. 14, 1974.
LOWEST WATER LEVEL 15.33 BELOW LSD, SEP. 25, 1972.
RECORDS AVAILABLE 1961-77.

DEC.23, 1976 12.02, MAR.21, 1977 11.02, JUNE14, 1977 11.81, SEP.26, 1977 12.90.

380333098465901. 23-13W-8CCB. KANSAS GEOL. SURVEY. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 126 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 1.0 FOOT ABOVE LAND SURFACE.
ALTITUDE OF LAND SURFACE 1895 FEET.
HIGHEST WATER LEVEL 4.49 BELOW LSD, DEC. 17, 1973.
LOWEST WATER LEVEL 9.70 BELOW LSD, AUG. 14, 1972.
RECORDS AVAILABLE 1972-73, 1976-77.

DEC.23, 1976 7.64, MAR.21, 1977 7.40, JUNE14, 1977 7.72, SEP.26, 1977 8.55.

380136098544001. 23-14W-30BBB. KANSAS GEOLOGICAL SURVEY. DRILLED, UNUSED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 156 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 2.5 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 1988 FEET.
HIGHEST WATER LEVEL 29.62 BELOW LSD, MAR. 25, 1975.
LOWEST WATER LEVEL 38.62 BELOW LSD, JUNE 14, 1977.
RECORDS AVAILABLE 1974-77.

DEC.21, 1976 31.43, MAR.21, 1977 33.38, JUNE14, 1977 38.62, SEP.26, 1977 35.09.

375605098480401. 24-13W-30BCB. JEROME SAYLER. DRILLED, WATER-TABLE OBSERVATION WELL IN DEPOSITS OF PLEISTOCENE AGE. DEPTH 49 FEET, DIAMETER 2 INCHES. MEASURING POINT, TOP CASING, 1.5 FEET ABOVE LAND SURFACE.
ALTITUDE OF LAND SURFACE 1936 FEET.
HIGHEST WATER LEVEL 7.39 BELOW LSD, MAR. 14, 1974.
LOWEST WATER LEVEL 12.49 BELOW LSD, JUNE 14, 1977.
RECORDS AVAILABLE 1973-77.

DEC.21, 1976 11.98, MAR.21, 1977 12.08, JUNE14, 1977 12.49, SEP.30, 1977 11.80.

375433098444601. 25-13W-3BBB. M. L. HALLEY. DRIVEN, UNUSED, WATER-TABLE WELL IN SAND AND GRAVEL OF PLEISTOCENE AGE. DIAMETER 1.25 INCHES, DEPTH 32 FEET. MEASURING POINT, TOP OF PIPE, 0.80 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 1932.1 FEET.
HIGHEST WATER LEVEL 2.75 BELOW LSD, MAY 21, 1952.
LOWEST WATER LEVEL 21.45 BELOW LSD, SEP. 24, 1968.
RECORDS AVAILABLE 1951-77.

DEC.20, 1976 14.86, MAR.21, 1977 15.43, JUNE16, 1977 16.56, SEP.30, 1977 14.55.

375228098451901. 25-13W-16ACC. ROBERT SHANK. DRILLED, WATER-TABLE IRRIGATION WELL. DEPTH 130 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTHEAST SIDE OF PUMP BASE, 0.5 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 23.66 BELOW LSD, JUNE 16, 1977.
LOWEST WATER LEVEL 24.69 BELOW LSD, SEP. 30, 1977.
RECORDS AVAILABLE 1977.

JUNE16, 1977 23.66, SEP.30, 1977 24.69.

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374039101343701. 27-39W-27BBA. M. P. MOLZ. DRILLED, ARTESIAN IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGAWLALA FORMATION. DEPTH 379 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN EAST SIDE OF PUMP BASE, 0.3 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3174.9 FEET.
HIGHEST WATER LEVEL 78.41 BELOW LSD, JAN. 30, 1959.
LOWEST WATER LEVEL 160.77 BELOW LSD, MAR. 7, 1977.
RECORDS AVAILABLE 1958-77.

JAN.19, 1977 159.98, MAR. 7, 1977 160.77G.

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373901101334801. 27-39W-34DDD. EARL H. MOORE. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 330 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 1.4 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 3153.1 FEET.
HIGHEST WATER LEVEL 84.15 BELOW LSD, FEB. 3, 1959.
LOWEST WATER LEVEL 210.45 BELOW LSD, JAN. 19, 1977.
RECORDS AVAILABLE 1959-60, 1963, 1965-74, 1976-77.

JAN.19, 1977 210.45.

374116101412501. 27-40W-21DAA. LEAH CARRITHERS. DRILLED, UNUSED, WATER-TABLE WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 85 FEET, DIAMETER 5 INCHES. MEASURING POINT, LOWER NORTH EDGE OF BOARD, 1.00 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3235.2 FEET.
HIGHEST WATER LEVEL 43.40 BELOW LSD, NOV. 6, 1950.
LOWEST WATER LEVEL 70.40 BELOW LSD, SEP. 19, 1977.
RECORDS AVAILABLE 1939-77.

JAN.19, 1977 67.06, MAR. 7, 1977 68.00, JUNE21, 1977 68.74, SEP.19, 1977 70.40.

373901101573501. 27-42W-31CCC. EARL ANDERSON. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS, OGALLALA FORMATION AND UNDIFFERENTIATED MESOZOIC DEPOSITS. DEPTH 400 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN EAST SIDE OF STEEL PUMP BASE, 1.00 FOOT ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE3537 FEET.
HIGHEST WATER LEVEL 190.33 BELOW LSD, FEB. 25, 1960.
LOWEST WATER LEVEL 225.81 BELOW LSD, SEP. 19, 1977.
RECORDS AVAILABLE 1950-77.

JAN.19, 1977 224.62, SEP.19, 1977 225.81.

373703101334001. 28-39W-14BBC. HERBERT CAMPBELL, JR. DRILLED, UNUSED ARTESIAN WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS, OGALLALA FORMATION AND UNDIFFERENTIATED MESOZOIC DEPOSITS. DEPTH 419 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP EAST SIDE OF CASING, AT LAND SURFACE. 6 = MEASURED BY K.S.B.A. MP CHANGED TO 0.5 FOOT ABOVE LSD, JANUARY 1963.
ALTITUDE OF LAND SURFACE 3150.0 FEET.
HIGHEST WATER LEVEL 82.01 BELOW LSD, MAR. 21, 1960.
LOWEST WATER LEVEL 124.70 BELOW LSD, SEP. 19, 1977.
RECORDS AVAILABLE 1959-77.

JAN.19, 1977 122.72, MAR. 7, 1977 123.56, SEP.19, 1977 124.70.

373433101320201. 28-39W-36ABB. FRED SHORE. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 408 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN PUMP BASE, SOUTH SIDE, 1.3 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 3145.3 FEET.
HIGHEST WATER LEVEL 75.05 BELOW LSD, MAR. 31, 1960.
LOWEST WATER LEVEL 165.91 BELOW LSD, SEP. 15, 1976.
RECORDS AVAILABLE 1959-60, 1962-67, 1969-77.

JAN.19, 1977 156.27, MAR. 7, 1977 162.17, JUNE21, 1977 164.55, SEP.19, 1977 165.62.

373716101380902. 28-40W-12DDD2. U.S.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 280 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 1.8 FEET ABOVE LSD. 6 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3225.20 FEET.
HIGHEST WATER LEVEL 101.53 BELOW LSD, MAR. 3, 1964.
LOWEST WATER LEVEL 206.71 BELOW LSD, SEP. 19, 1977.
RECORDS AVAILABLE 1963-77.

JAN.19, 1977 174.09, MAR. 7, 1977 181.44, JUNE21, 1977 187.76, SEP.19, 1977 206.71.

373136101450601. 29-41W-13ACC. ALLIENE DICE. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 423 FEET, DIAMETER 16 INCHES. MEASURING POINT, LOWER EDGE OF CUT-OUT SOUTHEAST SIDE OF PUMP, 2.0 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 3344.4 FEET.
HIGHEST WATER LEVEL 170.87 BELOW LSD, MAR. 30, 1960.
LOWEST WATER LEVEL 238.09 BELOW LSD, SEP. 19, 1977.
RECORDS AVAILABLE 1959-60, 1963-77.

JAN.19, 1977 237.37, MAR. 7, 1977 236.74, SEP.19, 1977 238.09.

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            ******   STANTON COUNTY          CONTINUED

373018101521101.     29-42W-24CCC. O. H. WILCOX. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEIS-
            TOCENE DEPOSITS, OGALLALA FORMATION AND UNDIFFERENTIATED MESOZOIC DEPOSITS. DEPTH 515 FEET, DIAMETER
            16 INCHES. MEASURING POINT, TOP OF CASING, 1.60 FEET ABOVE LSD.
            ALTITUDE OF LAND SURFACE 3484.2  FEET.
            HIGHEST WATER LEVEL  196.50 BELOW LSD, APR. 15, 1969.
            LOWEST WATER LEVEL  254.38 BELOW LSD, DEC. 28, 1970.
            RECORDS AVAILABLE 1960, 1965-77.

            JAN.19, 1977   206.88, MAR. 7, 1977   211.61, JUNE21, 1977   214.45, SEP.19, 1977   214.90.


372504101384901.     30-40W-24CDC. IONE SHORE. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE
            DEPOSITS, OGALLALA FORMATION AND UNDIFFERENTIATED MESOZOIC DEPOSITS. DEPTH 295 FEET, DIAMETER 16 IN-
            CHES. MEASURING POINT, HOLE IN PUMP BASE, EAST SIDE, 2.0 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
            ALTITUDE OF LAND SURFACE 3237    FEET.
            HIGHEST WATER LEVEL  105.07 BELOW LSD, APR.  1, 1960.
            LOWEST WATER LEVEL  160.57 BELOW LSD, DEC.  4, 1974.
            RECORDS AVAILABLE 1959-60, 1963-77.

            JAN.20, 1977   145.17, MAR. 7, 1977   146.38.


372405102005301.     30-43W-34BBB. W. T. LAUMAN. DRILLED, ARTESIAN IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE
            DEPOSITS AND OGALLALA FORMATION. DEPTH 103 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN SOUTH
            SIDE OF PUMP BASE, 1.15 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
            ALTITUDE OF LAND SURFACE 3621.85 FEET.
            HIGHEST WATER LEVEL   45.72 BELOW LSD, DEC.  4, 1958.
            LOWEST WATER LEVEL   92.81 BELOW LSD, SEP. 19, 1977.
            RECORDS AVAILABLE 1958-77.

            JAN.19, 1977    83.30, MAR. 7, 1977    89.54C,JUNE21, 1977    85.30, SEP.19, 1977    92.81.


            ******   STEVENS COUNTY

371950101102901.     31-35W-19CCC. C. H. BUNTON. DRILLED, WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEIS-
            TOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 300 FEET, DIAMETER 16 INCHES. MEASURING POINT, EDGE
            OF 2-INCH HOLE IN NORTHWEST SIDE OF PUMP-HEAD BASE, 0.30 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
            ALTITUDE OF LAND SURFACE 3039    FEET.
            HIGHEST WATER LEVEL  178.57 BELOW LSD, AUG. 12, 1963.
            LOWEST WATER LEVEL  213.43 BELOW LSD, SEP. 19, 1977.
            RECORDS AVAILABLE 1962-77.

            JAN.20, 1977   211.10, MAR. 7, 1977   211.67, JUNE21, 1977   212.72, SEP.19, 1977   213.43.


372227101121501.     31-36W-2CDD. MRS. EARL CLARK. DRILLED, ARTESIN IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE
            DEPOSITS AND OGALLALA FORMATION. DEPTH 410 FEET, DIAMETER 16 INCHES. MEASURING POINT, LOWER EDGE OF
            CUT-OUT ON EAST SIDE OF STEEL PUMP BASE, 1.00 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. MP CHANGED TO
            BOLT HOLE, NORTHEAST CORNER, 0.2 FOOT ABOVE LSD, JANUARY 1974. MP CHANGED TO LAND SURFACE, JANUARY
            1976.
            ALTITUDE OF LAND SURFACE 3019    FEET.
            HIGHEST WATER LEVEL  140.50 BELOW LSD, MAR. 21, 1960.
            LOWEST WATER LEVEL  174.83 BELOW LSD, AUG. 17, 1966.
            RECORDS AVAILABLE 1958-60, 1963-77.

            JAN.20, 1977   169.33, MAR. 7, 1977   173.39, SEP.19, 1977   171.20.


372016101201201.     31-37W-22BCC. WALTER CROTTS. DRILLED, WATER-TABLE DOMESTIC WELL IN UNDIFFERENTIATED PLEISTOCENE
            DEPOSITS AND OGALLALA FORMATION. DEPTH 258 FEET, DIAMETER 6 INCHES. MEASURING POINT, TOP OF SLIT IN
            CASING, 0.90 FOOT ABOVE LSD. G = MEASURED BY OWNER AND K.S.B.A.
            ALTITUDE OF LAND SURFACE 3096    FEET.
            HIGHEST WATER LEVEL  121.67 BELOW LSD, JAN. 14, 1963.
            LOWEST WATER LEVEL  165.51 BELOW LSD, SEP. 19, 1977.
            RECORDS AVAILABLE 1956-77.

            JAN.19, 1977   163.18, SEP.19, 1977   165.51.


371733101060901.     32-35W-2CBB. L. L. WULFEMEYER. DRILLED WATER-TABLE IRRIGATION WELL IN PLIO-PLEIST SERIES. DEPTH
            453 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE NORTHEAST CORNER OF PUMP BASE, 0.5 FOOT ABOVE
            LSD. G = MEASURED BY K.S.B.A.
            ALTITUDE OF LAND SURFACE 2988.5  FEET.
            HIGHEST WATER LEVEL  229.52 BELOW LSD, JAN. 28, 1965.
            LOWEST WATER LEVEL  274.58 BELOW LSD, JUNE 21, 1977.
            RECORDS AVAILABLE 1964-77.

            JAN.20, 1977   256.84, MAR. 7, 1977   273.41B,JUNE21, 1977   274.58.
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****** STEVENS COUNTY CONTINUED

370831101114001. 33-36W-26DDD. R. O. HEGER. DRILLED. WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 360 FEET. DIAMETER 16 INCHES. MEASURING POINT. TOP EDGE HOLE IN PUMP BASE. 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3032.1 FEET.
HIGHEST WATER LEVEL 110.73 BELOW LSD. JAN. 18. 1966.
LOWEST WATER LEVEL 163.27 BELOW LSD. SEP. 9. 1974.
RECORDS AVAILABLE 1942. 1944-47. 1953-77.

JAN.19. 1977 139.10. MAR. 7. 1977 140.52. JUNE21. 1977 150.03. SEP.19. 1977 150.57.

370931101280201. 33-38W-20DDB. JOHN R. SLEMP. DRILLED. WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 405 FEET. DIAMETER 16 INCHES. MEASURING POINT. LOWER WEST SIDE OF PUMP. 1.10 FEET ABOVE LSD. MP CHANGED TO TOP OF CASING. AT LAND SURFACE. MARCH 1976. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3190.7 FEET.
HIGHEST WATER LEVEL 119.97 BELOW LSD. APR. 8. 1970.
LOWEST WATER LEVEL 161.30 BELOW LSD. APR. 16. 1968.
RECORDS AVAILABLE 1959-77.

JAN.20. 1977 141.50. SEP.19. 1977 142.97.

390654101252001. 34-38W-2CDB. E. MOSER. DRILLED. WATER-TABLE IRRIGATION WELL IN UNDIFFERENTIATED PLEISTOCENE DEPOSITS AND OGALLALA FORMATION. DEPTH 607 FEET. DIAMETER INCHES. MEASURING POINT. BASE OF CUT-OUT. EAST SIDE OF PUMP. 0.6 FOOT ABOVE LSD. MEASURED BY K.S.B.A. MP CHANGED TO HOLE AT BASE OF PUMP. EAST SIDE. AT LAND SURFACE. JANUARY 1974.
ALTITUDE OF LAND SURFACE 3197 FEET.
HIGHEST WATER LEVEL 131.92 BELOW LSD. JAN. 19. 1971.
LOWEST WATER LEVEL 152.97 BELOW LSD. SEP. 19. 1977.
RECORDS AVAILABLE 1967-77.

JAN.19. 1977 142.84. SEP.19. 1977 152.97.

****** THOMAS COUNTY

393341101031401. 6-34W-1DDD. JOHN SANDERS. DRILLED. WATER-TABLE DOMESTIC WELL IN THE OGALLALA FORMATION. DEPTH FEET. DIAMETER 6 INCHES. MEASURING POINT. TOP OF CASING. AT LAND SURFACE.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 131.50 BELOW LSD. DEC. 9. 1971.
LOWEST WATER LEVEL 142.96 BELOW LSD. SEP. 14. 1976.
RECORDS AVAILABLE 1971. 1973-77.

JUNE 7. 1977 134.58. SEP. 7. 1977 139.23.

393144101084301. 6-34W-17CBC. C. A. DECHERT. DRILLED. WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES. DEPTH 264 FEET. MEASURING POINT. HOLE IN WEST SIDE OF PUMP BASE. 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3261 FEET.
HIGHEST WATER LEVEL 140.81 BELOW LSD. MAR. 11. 1975.
LOWEST WATER LEVEL 162.39 BELOW LSD. MAR. 8. 1971.
RECORDS AVAILABLE 1962-77.

JAN. 5. 1977 156.48. SEP. 7. 1977 158.30.

393020101113101. 6-35W-26ACB. LLOYD N. WHITE. DRILLED. WATER-TABLE UNUSED WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES. DEPTH 250 FEET. MEASURING POINT. TOP OF RECORDER FLOOR. 0.80 FOOT ABOVE LSD. RECORDER REMOVED. JANUARY 1975. MEASURED QUARTERLY BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3300 FEET.
HIGHEST WATER LEVEL 146.75 BELOW LSD. SEP. 16. 1975.
LOWEST WATER LEVEL 157.25 BELOW LSD. SEP. 7. 1977.
RECORDS AVAILABLE 1965-77.

JAN. 5. 1977 151.03. JUNE 7. 1977 152.38. SEP. 7. 1977 157.25.

392433100453001. 7-31W-26CCC. IRENE RALL. DRILLED. WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 14 INCHES. DEPTH 177 FEET. MEASURING POINT. HOLE INSIDE RING OF PUMP-HEAD BASE ON EAST SIDE. 0.90 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2989 FEET.
HIGHEST WATER LEVEL 102.49 BELOW LSD. JAN. 15. 1963.
LOWEST WATER LEVEL 153.32 BELOW LSD. SEP. 13. 1976.
RECORDS AVAILABLE 1962-77.

JAN. 5. 1977 114.95. JUNE 6. 1977 113.89. SEP. 6. 1977 115.74.

****** THOMAS COUNTY CONTINUED

392620101221101. 7-36W-17CCC. R. H. MAYER. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 10 INCHES, DEPTH 275 FEET. MEASURING POINT, HOLE IN PUMP BASE, 1.00 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3417 FEET.
HIGHEST WATER LEVEL 131.49 BELOW LSD, APR. 9, 1963,
LOWEST WATER LEVEL 148.21 BELOW LSD, SEP. 14, 1976.
RECORDS AVAILABLE 1962-77.

JAN. 5, 1977 141.47, JUNE 7, 1977 139.74.

391940100521901. 8-32W-27DAB. T. A. RYAN. DRILLED, UNUSED WATER-TABLE WELL IN OGALLALA FORMATION. DIAMETER 8 INCHES, DEPTH 156 FEET. MEASURING POINT, TOP WEST SIDE OF CASING, 0.6 FOOT ABOVE LSD. MEASURING POINT CHANGED TO LAND SURFACE JANUARY 1970. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3070 FEET.
HIGHEST WATER LEVEL 88.64 BELOW LSD, SEP. 15, 1975,
LOWEST WATER LEVEL 118.79 BELOW LSD, JULY 30, 1956.
RECORDS AVAILABLE 1942-77.

JAN. 5, 1977 110.15, JUNE 7, 1977 111.18, SEP. 7, 1977 111.80.

391908100595301. 8-33W-34BBC. HAROLD HILLS, JR. DRILLED WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 200 FEET. MEASURING POINT, HOLE IN SIDE OF PUMP, 0.60 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3160 FEET.
HIGHEST WATER LEVEL 128.38 BELOW LSD, MAR. 8, 1966,
LOWEST WATER LEVEL 167.15 BELOW LSD, SEP. 7, 1966.
RECORDS AVAILABLE 1964-77.

JAN. 5, 1977 138.96, JUNE 7, 1977 140.60, SEP. 7, 1977 149.72.

392329101040201. 8-34W-10AC. KS. AGRICULTURAL EXPERIMENT STATION. DRILLED, UNUSED, WATER-TABLE WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 160 FEET. MEASURING POINT, TOP OF HOLE IN CONCRETE WELL COVER, 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3179 FEET.
HIGHEST WATER LEVEL 112.31 BELOW LSD, MAY 20, 1954, MAY 31, 1954,
LOWEST WATER LEVEL 123.57 BELOW LSD, SEP. 10, 1976.
RECORDS AVAILABLE 1947-77.

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
						1976						
5	......	......	......	......	......	......	......	......	......	122.30	121.80	122.51
10	......	......	......	......	......	......	......	......	......	122.20	121.70	122.52
15	......	......	......	......	......	......	......	......	......	122.10	121.65	122.20
20	......	......	......	......	......	......	......	......	......	121.84	121.44	121.90
25	......	......	......	......	......	......	......	......	......	122.18	123.34	121.98
EOM	......	......	......	......	......	......	......	......	......	122.00	122.91	121.72
						1977						
5	121.70	121.20	121.13	121.60	121.35	121.05	121.46	123.20	122.21	......	......	......
10	121.60	121.16	121.65	121.47	121.25	121.15	121.93	123.29	122.41	......	......	......
15	121.60	121.04	122.10	121.45	121.20	120.97	122.20	123.52	122.16	......	......	......
20	121.46	121.32	122.28	121.53	121.13	121.25	122.56	123.40	122.26	......	......	......
25	121.32	121.18	121.98	121.45	121.15	121.17	122.99	122.65	122.34	......	......	......
EOM	121.25	121.14	121.60	121.54	121.16	121.20	123.17	122.37	122.66	......	......	......

392153101223802. 8-36W-10ABA2. NORA CARPENTER. DRILLED, UNUSED WATER-TABLE WELL IN OGALLALA FORMATION. DEPTH 140 FEET, DIAMETER 6 INCHES. MEASURING POINT, TOP OF CASING, 0.3 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 3420 FEET.
HIGHEST WATER LEVEL 122.09 BELOW LSD, MAR. 8, 1966,
LOWEST WATER LEVEL 128.02 BELOW LSD, OCT. 14, 1948.
RECORDS AVAILABLE 1942-77.

JAN. 5, 1977 125.35, JUNE 7, 1977 125.72, SEP. 7, 1977 125.99.

391421100574901. 9-33W-26DAD. HENRY SIEBERT. WATER-TABLE, UNUSED, OBSERVATION WELL IN OGALLALA FORMATION. DEPTH 270 FEET, DIAMETER 12 INCHES. MEASURING POINT, TOP OF CASING, 2.0 FEET ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 141.44 BELOW LSD, JUNE 7, 1977,
LOWEST WATER LEVEL 145.70 BELOW LSD, SEP. 7, 1977.
RECORDS AVAILABLE 1977.

APR.13, 1977 141.60, JUNE 7, 1977 141.44, SEP. 7, 1977 145.70.

391303101031701. 10-33W-6BBC. D. S. DAHL. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 316 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN COVER, AT LAND SURFACE. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3190.6 FEET.
HIGHEST WATER LEVEL 160.64 BELOW LSD, MAR. 11, 1971,
LOWEST WATER LEVEL 236.41 BELOW LSD, SEP. 7, 1977.
RECORDS AVAILABLE 1971-77.

JAN. 5, 1977 177.66, JUNE 7, 1977 173.96, SEP. 7, 1977 236.41C.

****** TREGO COUNTY

385919099542601. 12-23W-20CCC. HOWARD AND FLOYD KEYSER. DRILLED, WATER-TABLE IRRIGATION WELL IN ALLUVIUM. DIAMETER 16 INCHES, DEPTH 65 FEET. MEASURING POINT, HOLE IN PUMP BASE, 0.30 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 2373.6 FEET.
HIGHEST WATER LEVEL 18.21 BELOW LSD, JUNE 8, 1973.
LOWEST WATER LEVEL 26.22 BELOW LSD, SEP. 1, 1971.
RECORDS AVAILABLE 1960, 1964-65, 1967-77.

DEC.13, 1976 20.20, JUNE 8, 1977 19.66, SEP. 8, 1977 22.03.

****** WABAUNSEE COUNTY

391029096171301. 10-10E-15DCC. K.G.S. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER, 2 INCHES, DEPTH 39 FEET. MEASURING POINT, TOP OF PIPE, 1.0 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 971 FEET.
HIGHEST WATER LEVEL 5.65 BELOW LSD, DEC. 20, 1973.
LOWEST WATER LEVEL 20.58 BELOW LSD, MAR. 17, 1976.
RECORDS AVAILABLE 1966-77.

DEC. 8, 1976 15.98, JUNE15, 1977 15.70, SEP.13, 1977 12.80.

390909096053101. 10-12E-29ADD. KANSAS GEOLOGICAL SURVEY. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM AND NEWMAN TERRACE DEPOSITS. DEPTH FEET, DIAMETER 2 INCHES. MEASURING POINT, TOP OF CASING, 2.5 FEET ABOVE LSD. MEASURED BY K.S.B.A.
NO ALTITUDE OF LAND SURFACE AVAILABLE FOR THIS WELL.
HIGHEST WATER LEVEL 12.75 BELOW LSD, JUNE 3, 1976.
LOWEST WATER LEVEL 20.84 BELOW LSD, DEC. 8, 1976.
RECORDS AVAILABLE 1974-77.

DEC. 8, 1976 20.84, JUNE13, 1977 18.54, SEP. 6, 1977 15.00.

****** WALLACE COUNTY

390254101305402. 11-38W-35CCC2. LINDY BRETZ. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 189 FEET. MEASURING POINT, HOLE NORTHWEST SIDE OF PUMP, 0.30 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3372 FEET.
HIGHEST WATER LEVEL 76.00 BELOW LSD, AUG. 25, 1966.
LOWEST WATER LEVEL 143.49 BELOW LSD, SEP. 15, 1976.
RECORDS AVAILABLE 1966-77.

JAN. 6, 1977 138.60, JUNE 8, 1977 138.74, SEP. 8, 1977 143.42.

390618102000301. 11-42W-8DDC. THERON CULWELL. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 166 FEET. MEASURING POINT, HOLE NORTHEAST SIDE PUMP BASE, 0.50 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3953 FEET.
HIGHEST WATER LEVEL 99.89 BELOW LSD, MAR. 6, 1970.
LOWEST WATER LEVEL 118.94 BELOW LSD, SEP. 15, 1976.
RECORDS AVAILABLE 1969-77.

JAN.18, 1977 107.10, JUNE 8, 1977 106.92, SEP. 8, 1977 113.17.

385635101583001. 13-42W-10BAC. HOWARD WILSON. DRILLED, WATER-TABLE STOCK WELL IN THE OGALLALA FORMATION. DEPTH 52 FEET, DIAMETER 4 INCHES. MEASURING POINT, HOLE ON EAST SIDE OF PUMP BASE, 1.0 FOOT ABOVE LSD.
ALTITUDE OF LAND SURFACE 3770 FEET.
HIGHEST WATER LEVEL 37.97 BELOW LSD, JAN. 16, 1973, JAN. 16, 1975, JUNE 9, 1976.
LOWEST WATER LEVEL 38.67 BELOW LSD, SEP. 8, 1977.
RECORDS AVAILABLE 1973, 1975-77.

JUNE 8, 1977 38.02, SEP. 8, 1977 38.67.

385006101570301. 14-42W-14DBD. G. DOOP. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 400 FEET. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, INSIDE HOUSING, 0.60 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A. MEASURING POINT CHANGED TO LAND SURFACE, MARCH 16, 1976.
ALTITUDE OF LAND SURFACE 3795.8 FEET.
HIGHEST WATER LEVEL 102.06 BELOW LSD, JUNE 24, 1958.
LOWEST WATER LEVEL 138.93 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1958, 1965-77.

JAN.17, 1977 132.07, MAR.10, 1977 130.44, JUNE13, 1977 131.17, SEP.26, 1977 138.93.

****** WALLACE COUNTY CONTINUED

384315101325301. 15-38W-28DDD. SELMA NELSON. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 18 INCHES, DEPTH 202 FEET. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 0.30 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3582.0 FEET.
HIGHEST WATER LEVEL 85.70 BELOW LSD, OCT. 7, 1960.
LOWEST WATER LEVEL 141.77 BELOW LSD, SEP. 21, 1976.
RECORDS AVAILABLE 1960, 1962-77.

JAN.18, 1977 138.93, JUNE13, 1977 141.01.

384651101374201. 15-39W-20CD. FRASIER FARMS. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 30 INCHES, DEPTH 195 FEET. MEASURING POINT, HOLE IN SOUTHWEST SIDE OF PUMP, 0.20 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3584.6 FEET.
HIGHEST WATER LEVEL 112.22 BELOW LSD, JUNE 23, 1958.
LOWEST WATER LEVEL 157.89 BELOW LSD, SEP. 21, 1976.
RECORDS AVAILABLE 1958, 1962-77.

JAN.18, 1977 152.69, MAR.10, 1977 150.43, SEP.26, 1977 155.41.

384558101403701. 15-39W-8ACC. WILLIAM MAI. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 18 INCHES, DEPTH 222 FEET. MEASURING POINT, HOLE IN NORTHEAST CORNER PUMP BASE, 2.00 FEET ABOVE LSD.
G = MEASURED BY K.S.B.A. MP CHANGED TO 3.0 FEET ABOVE LSD, JANUARY 1976.
ALTITUDE OF LAND SURFACE 3623 FEET.
HIGHEST WATER LEVEL 104.00 BELOW LSD, MAY 10, 1948.
LOWEST WATER LEVEL 159.21 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1948, 1951, 1958, 1964-77.

JAN.18, 1977 157.16, MAR.10, 1977 154.92, JUNE13, 1977 156.91, SEP.26, 1977 159.21.

384323101372101. 15-39W-26ACC. JOHN LARSON. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 239 FEET. MEASURING POINT, HOLE WEST SIDE PUMP BASE, 0.5 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3561.6 FEET.
HIGHEST WATER LEVEL 98.93 BELOW LSD, OCT. 7, 1960.
LOWEST WATER LEVEL 143.71 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1960, 1965-77.

JAN.18, 1977 136.80, JUNE13, 1977 137.18, SEP.26, 1977 143.71.

384710101451901. 15-40W-3BAB. J. C. HEISE. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 254 FEET. MEASURING POINT, TOP EAST SIDE OF CASING, 0.2 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3636.3 FEET.
HIGHEST WATER LEVEL 74.56 BELOW LSD, JUNE 19, 1958.
LOWEST WATER LEVEL 114.66 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1957-58, 1965-77.

JAN.17, 1977 108.79, MAR.10, 1977 108.27, JUNE13, 1977 109.39, SEP.26, 1977 114.66.

384316101441601. 15-40W-26CAB. ETHEL M. MARTIN, ET AL. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION, DIAMETER INCHES, DEPTH FEET. MEASURING POINT, HALF-INCH HOLE SOUTHEAST SIDE PUMP BASE,
0.20 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3646 FEET.
HIGHEST WATER LEVEL 102.05 BELOW LSD, JAN. 24, 1969.
LOWEST WATER LEVEL 130.10 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1969-77.

JAN.18, 1977 122.84, MAR.10, 1977 123.28, JUNE13, 1977 126.37, SEP.26, 1977 130.10.

384618101515901. 15-41W-10BAB. O. F. BRANDBERG. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 264 FEET. MEASURING POINT, TOP EDGE OF 2-INCH PIPE, 0.3 FOOT ABOVE LSD.
G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3787.3 FEET.
HIGHEST WATER LEVEL 161.16 BELOW LSD, JUNE 11, 1958.
LOWEST WATER LEVEL 196.16 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1958, 1966-77.

JAN.17, 1977 188.91, MAR.10, 1977 188.75, JUNE13, 1977 190.42, SEP.26, 1977 196.16.

****** WALLACE COUNTY CONTINUED

384212101491701. 15-41W-36DDB. F. R. POTTER. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 265 FEET. MEASURING POINT, REMOVE 0.75 INCH PLUG ON SOUTH SIDE, 1.50 FEET ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3695 FEET.
HIGHEST WATER LEVEL 110.36 BELOW LSD, MAR. 28, 1967.
LOWEST WATER LEVEL 136.24 BELOW LSD, SEP. 17, 1974.
RECORDS AVAILABLE 1966-77.

JAN.18, 1977 134.35, MAR.10, 1977 134.21, JUNE13, 1977 134.07.

****** WASHINGTON COUNTY

393551097205101. 5-1E-20CCC. ELMER HEITMAN. DRILLED, ABANDONED,WATER-TABLE OBSERVATION WELL. DEPTH 104 FEET, DIAMETER 8 INCHES. MEASURING POINT, TOP OF CASING, 3.0 FEET ABOVE LSD. DISCONTINUED, REPLACED BY WELL 5-1E-20ADA.
ALTITUDE OF LAND SURFACE 1361 FEET.
HIGHEST WATER LEVEL 75.05 BELOW LSD, APR. 10, 1975.
LOWEST WATER LEVEL 85.40 BELOW LSD, SEP. 9, 1976.
RECORDS AVAILABLE 1975-76.

NO MEASUREMENTS 1977 WATER YEAR.

393407097205901. 5-1E-31DDD. LOWELL E. TOBYNE. DRILLED, WATER-TABLE OBSERVATION WELL. DEPTH 63 FEET, DIAMETER 1.25 INCHES. MEASURING POINT, TOP OF PIPE, 3.0 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 1278 FEET.
HIGHEST WATER LEVEL 17.22 BELOW LSD, SEP. 13, 1977.
LOWEST WATER LEVEL 19.55 BELOW LSD, SEP. 9, 1976.
RECORDS AVAILABLE 1975-77.

DEC. 8, 1976 19.09, JUNE15, 1977 18.30, SEP.13, 1977 17.22.

****** WICHITA COUNTY

383837101130601. 16-35W-20CCC. E. L. MILLER. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 109 FEET, DIAMETER 18 INCHES. MEASURING POINT, HOLE IN BASE OF PUMP, 0.5 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3231.20 FEET.
HIGHEST WATER LEVEL 103.24 BELOW LSD, MAY 7, 1951.
LOWEST WATER LEVEL 154.52 BELOW LSD, SEP. 21, 1976.
RECORDS AVAILABLE 1950-51, 1953-77.

JAN.18, 1977 154.19.

384008101215301. 16-37W-13BBC. DEAN WIEGERS. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 136 FEET, DIAMETER 18 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, AT LAND SURFACE. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3331 FEET.
HIGHEST WATER LEVEL 77.54 BELOW LSD, NOV. 16, 1950.
LOWEST WATER LEVEL 126.50 BELOW LSD, SEP. 16, 1975.
RECORDS AVAILABLE 1950-51, 1953-77.

JAN.17, 1977 121.02, MAR.10, 1977 120.53, JUNE13, 1977 121.30, SEP.26, 1977 122.06.

383816101264801. 16-37W-30ACB. H. E. MEYERS. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 220 FEET, DIAMETER 18 INCHES. MEASURING POINT, HOLE IN WEST SIDE OF PUMP BASE, 0.3 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3400 FEET.
HIGHEST WATER LEVEL 80.94 BELOW LSD, MAR. 29, 1951.
LOWEST WATER LEVEL 152.71 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1951, 1959-77.

JAN.18, 1977 144.68, MAR.10, 1977 145.68, SEP.26, 1977 152.71.

384106101300501. 16-38W-10ABB. MARGARET BUEHLER. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 210 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN HOUSING EAST SIDE OF PUMP, 1.0 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3456 FEET.
HIGHEST WATER LEVEL 77.56 BELOW LSD, MAR. 29, 1951.
LOWEST WATER LEVEL 145.11 BELOW LSD, SEP. 26, 1977.
RECORDS AVAILABLE 1951, 1965-77.

JAN.18, 1977 133.70, JUNE13, 1977 136.45, SEP.26, 1977 145.11.

****** WICHITA COUNTY CONTINUED

383954101311001. 16-38W-16ACC. V. WATT. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 205 FEET, DIAMETER 18 INCHES. MEASURING POINT, BOLT-HOLE ON NORTHWEST SIDE, 1.0 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3452 FEET.
HIGHEST WATER LEVEL 72.75 BELOW LSD, MAR. 29, 1951,
LOWEST WATER LEVEL 125.53 BELOW LSD, FEB. 19, 1977.
RECORDS AVAILABLE 1951, 1965-77.

FEB.19, 1977 125.53.

383251101141001. 17-35W-30CBB G. KNOBBE. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 218 FEET, DIAMETER 18 INCHES. MEASURING POINT, EAST SIDE OF CONCRETE BASE, AT LAND SURFACE. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3235.2 FEET.
HIGHEST WATER LEVEL 94.12 BELOW LSD, APR. 19, 1951,
LOWEST WATER LEVEL 158.43 BELOW LSD, SEP. 22, 1976.
RECORDS AVAILABLE 1951, 1965-77.

JAN.17, 1977 154.44, JUNE14, 1977 155.77.

383210101183401. 17-36W-33BCB. EUGENE BERNING. DRILLED WATER-TABLE RECORDER WELL IN OGALLALA FORMATION. DEPTH 187 FEET, DIAMETER 16 INCHES. MEASURING POINT, TOP OF CASING, 0.5 FOOT ABOVE LSD. RECORDER INSTALLED BY K.S.B.A. THIS IS A CONTINUOUS RECORDER, HOWEVER, ONLY A MONTHLY MEASUREMENT IS IN THIS FILE. BOARD OF AGRICULTURE HAS COMPLETE RECORD.
ALTITUDE OF LAND SURFACE 3286.0 FEET.
HIGHEST WATER LEVEL 112.35 BELOW LSD, MAR. 30, 1966,
LOWEST WATER LEVEL 177.22 BELOW LSD, MAR. 15, 1967.
RECORDS AVAILABLE 1965-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5, 1976	138.10	JAN. 5, 1977	137.50	APR. 5, 1977	138.60	JULY 5, 1977	137.54
NOV. 5	137.25	FEB. 5	136.85	MAY 5	137.90	AUG. 5	140.28
DEC. 5	138.20	MAR. 5	137.90	JUNE 5	137.50	SEP. 5	139.53

383228101250901. 17-37W-28CCC. JEAGER FARMS. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 190 FEET, DIAMETER 18 INCHES. MEASURING POINT, HOLE IN SOUTHEAST SIDE OF PUMP BASE, 0.5 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3360 FEET.
HIGHEST WATER LEVEL 98.31 BELOW LSD, MAR. 30, 1966,
LOWEST WATER LEVEL 134.35 BELOW LSD, SEP. 27, 1977.
RECORDS AVAILABLE 1964-77.

JAN.17, 1977 126.11, MAR.14, 1977 124.34, JUNE14, 1977 127.33, SEP.27, 1977 134.35.

383406101314401. 17-38W-21BBB. G. + F. BAUCK. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 165 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN EAST SIDE OF BASE, 0.5 FOOT ABOVE LSD. MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3446 FEET.
HIGHEST WATER LEVEL 90.00 BELOW LSD, NOV. 10, 1964,
LOWEST WATER LEVEL 123.52 BELOW LSD, SEP. 27, 1977.
RECORDS AVAILABLE 1964-77.

JAN.18, 1977 119.30, MAR.10, 1977 121.90, JUNE14, 1977 119.12, SEP.27, 1977 123.52.

382902101090301. 18-35W-14DCD. P. E. + F. W. KRAUSE. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DEPTH 139 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN NORTH SIDE OF PUMP BASE, 0.4 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3171.8 FEET.
HIGHEST WATER LEVEL 79.74 BELOW LSD, APR. 11, 1951,
LOWEST WATER LEVEL 115.32 BELOW LSD, MAR. 14, 1977.
RECORDS AVAILABLE 1951, 1958-66, 1968-77.

JAN.17, 1977 114.81, MAR.14, 1977 115.32, JUNE14, 1977 111.96.

382852101250901. 18-37W-21BBB. RUTH GIBSON. DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION. DIAMETER 16 INCHES, DEPTH 195 FEET. MEASURING POINT, EDGE OF 1-INCH HOLE IN SOUTHWEST SIDE OF PUMP BASE, 0.30 FOOT ABOVE LSD. G = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3360 FEET.
HIGHEST WATER LEVEL 98.26 BELOW LSD, FEB. 20, 1962,
LOWEST WATER LEVEL 154.33 BELOW LSD, JAN. 17, 1977.
RECORDS AVAILABLE 1962-77.

JAN.17, 1977 154.33, JUNE14, 1977 151.36.

****** WICHITA COUNTY CONTINUED

382031101321702. 18-38W-20ACC2, J. A. REIMER, DRILLED, WATER-TABLE IRRIGATION WELL IN OGALLALA FORMATION, DEPTH 169 FEET, DIAMETER 16 INCHES. MEASURING POINT, HOLE IN EAST SIDE OF PUMP BASE, 0.3 FOOT ABOVE LSD. 0 = MEASURED BY K.S.B.A.
ALTITUDE OF LAND SURFACE 3440 FEET.
HIGHEST WATER LEVEL 90.20 BELOW LSD, MAR. 21, 1951,
LOWEST WATER LEVEL 138.74 BELOW LSD, DEC. 11, 1974.
RECORDS AVAILABLE 1951, 1965-77.

JAN.18, 1977 131.30, JUNE14, 1977 132.93.

****** WYANDOTTE COUNTY

390543094430601. 11-24E-14BDA, K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 2 INCHES, DEPTH 53 FEET. MEASURING POINT TOP OF PIPE, 3.0 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 754.4 FEET.
HIGHEST WATER LEVEL 17.90 BELOW LSD, DEC. 26, 1973,
LOWEST WATER LEVEL 30.67 BELOW LSD, DEC. 9, 1976.
RECORDS AVAILABLE 1967-77.

DEC. 9, 1976 30.67, JUNE17, 1977 29.05, SEP.19, 1977 25.46.

390253094470501. 11-24E-31DAB, JOHNSON CO. W.D.1. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM AND PLEISTOCENE AGE. DEPTH 54 FEET, DIAMETER 12 INCHES. MEARING POINT, RECORDER FLOOR, 5.45 FEET ABOVE LSD. RECORDER DISCONTINUED NOVEMBER 1, 1976. QUARTERLY MEASUREMENT CONTINUED.
ALTITUDE OF LAND SURFACE 760 FEET.
HIGHEST WATER LEVEL 13.05 BELOW LSD, OCT. 15, 1973,
LOWEST WATER LEVEL 33.70 BELOW LSD, DEC. 31, 1974, FEB. 10, 1975, FEB. 15, 1975.
RECORDS AVAILABLE 1967-77.

OCT. 5, 1976 30.22, OCT.10, 1976 30.18, OCT.15, 1976 29.97, OCT.20, 1976 30.14,
OCT.25, 1976 30.15, OCT.31, 1976 30.17, DEC. 9, 1976 30.45, JUNE17, 1977 28.97,
SEP.19, 1977 21.45.

390319094460802. 11-24E-32ABA2, JOHNSON CO. W.D.1. DRILLED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 2 INCHES, DEPTH 44 FEET. MEASURING POINT, TOP OF PIPE, 0.3 FOOT ABOVE LSD. 0 = MEASURED BY OWNER. MEASURING POINT CHANGED TO 2.3 FEET ABOVE LSD, JUNE 1972. MEASURING POINT, CHANGED TO TOP OF PIPE, 2.1 FEET ABOVE LSD, SEPTEMBER 7, 1976.
ALTITUDE OF LAND SURFACE 765 FEET.
HIGHEST WATER LEVEL 22.05 BELOW LSD, NOV. 2, 1973,
LOWEST WATER LEVEL 45.50 BELOW LSD, NOV. 2, 1976.
RECORDS AVAILABLE 1967-77.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 5, 1977	43.26	APR. 1, 1977	42.75	JUNE 1, 1977	41.00	AUG. 1, 1977	37.09
FEB. 4	44.02	MAY 2	41.76	JULY 1	34.00	SEP. 2	34.00
MAR. 1	43.50						

390503094395902. 11-25E-20BAB2, K.G.S. AUGERED, WATER-TABLE OBSERVATION WELL IN ALLUVIUM, DIAMETER 2 INCHES DEPTH 77 FEET. MEASURING POINT, TOP OF PIPE, 3.0 FEET ABOVE LSD UNTIL SEPTEMBER 1972. KANSAS RIVER LEVEE RESULTED IN MP BEING RAISED 10.5 FEET TO 13.5 FEET ABOVE LSD.
ALTITUDE OF LAND SURFACE 766 FEET.
HIGHEST WATER LEVEL 34.50 BELOW LSD, MAR. 21, 1973,
LOWEST WATER LEVEL 46.13 BELOW LSD, JUNE 2, 1967.
RECORDS AVAILABLE 1967-77.

DEC. 9, 1976 44.88, JUNE17, 1977 43.32, SEP.19, 1977 35.20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ALLEN COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
24S 20E 35CDD	375434095111301	30	323IOLA	77-08-31	362	7.7	19.5	87	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
24S 20E 35CDD	26	5.3	28	40	1.3	4.0	140	0	115	4.5

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUFNTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
24S 20E 35CDD	23	16	.5	10	200	3.8	1.1	0	0	2

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
24S 20E 35CDD	0	0	0	0	0	.0	0	0	60

ANDERSON COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
20S 20E 5ADD	382025095125101	82	112ALVM	77-08-29	725	6.9	19.5	309	73
21S 18E 5DCA2	381455095265902	175	112ALVM	77-08-29	353	66.0	18.5	138	10
22S 20E 18AAA	380830095144301	23	111CLVM	77-08-29	4890	7.3	17.5	1680	1400

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
20S 20E 5ADD	110	9.1	18	11	.4	.4	270	0	221	54
21S 18E 5DCA2	42	8.0	11	15	.4	.2	150	0	123	.0
22S 20E 18AAA	450	140	300	28	3.2	6.0	300	0	246	24

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
20S 20E 5ADD	36	25	.1	18	400	10	.01	0	0	0
21S 18E 5DCA2	18	10	.2	22	280	2.8	.01	0	0	0
22S 20E 18AAA	1260	250	.4	11	3130	130	.10	0	200	4

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
20S 20E 5ADD	0	0	0	0	0	.0	0	0	60
21S 18E 5DCA2	0	0	0	0	0	.0	6	0	150
22S 20E 18AAA	0	0	20	20	10	.0	2	0	150

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

BARBER COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
32S 12W 4DBC	371710098374501	66	112ALVM	77-08-16	1420	6.8	21.0	555	300
33S 11W 28CBB	370837098314201	29	112ALVM	77-08-17	2650	7.8	22.0	220	82
34S 10W 16CAB	370507098245401	--	--	77-08-16	1120	6.8	18.5	507	180
35S 12W 8BAC	370108098390101	--	--	77-08-17	1020	7.0	18.0	488	250

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
32S 12W 4DBC	150	44	100	28	1.8	4.3	260	0	213	66
33S 11W 28CBB	14	45	620	86	18	5.5	210	0	172	5.3
34S 10W 16CAB	110	56	72	23	1.4	7.5	360	0	295	91
35S 12W 8BAC	100	58	50	18	1.0	3.2	300	0	246	48

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)
32S 12W 4DBC	340	120	.4	12	930	.10	.02	0	0	3
33S 11W 28CBB	5.2	1050	.1	.4	1830	.10	.00	10	0	5
34S 10W 16CAB	180	80	.3	18	780	14	.12	0	200	1
35S 12W 8BAC	280	50	.4	14	700	.00	.00	10	0	2

LOCAL IDENT- I- FIER	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
32S 12W 4DBC	0	10	560	0	420	.0	0	0	70
33S 11W 28CBB	0	10	0	0	430	.0	1	0	10
34S 10W 16CAB	0	0	10	0	0	.0	7	0	10
35S 12W 8BAC	0	10	10	20	0	.0	22	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

BARTON COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)
18S 11W 3BCC	383058098328201	--	77-09-20	580	8.2	15.5	231	0	76
19S 13W 9BCC	382453098462301	--	77-09-20	825	6.3	16.0	296	0	94
20S 14W 27BCA	381708098513901	--	77-09-20	640	6.7	20.0	264	44	81

LOCAL IDENT- I- FIER	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
18S 11W 3BCC	10	51	32	1.5	3.7	330	0	271	3.3	14
19S 13W 9BCC	15	83	37	2.1	5.1	340	0	279	273	46
20S 14W 27BCA	15	46	27	1.2	3.3	280	0	230	89	58

LOCAL IDENT- I- FIER	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
18S 11W 3BCC	63	.3	36	400	.60	.02	0	100	7	0
19S 13W 9BCC	82	.3	32	540	.20	.01	0	200	8	0
20S 14W 27BCA	48	.6	19	430	5.2	.04	10	100	6	0

LOCAL IDENT- I- FIER	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
18S 11W 3BCC	10	0	40	0	.0	3	0	10
19S 13W 9BCC	0	30	0	0	.0	2	0	10
20S 14W 27BCA	0	10	20	10	.0	0	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

BOURBON COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
23S 22E 29AAA	380127095003501	18	323OLBG	77-08-31	1040	6.9	15.0	511	170
26S 24E 29BBB	374537094485201	36	325LBTT	77-08-31	1920	7.2	17.5	606	300
26S 25E 35CCB	374405094385801	30	325CHRK	77-08-31	474	7.2	18.0	198	94

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
23S 22E 29AAA	190	8.5	17	7	.3	.7	430	0	353	87
26S 24E 29BBB	190	32	170	38	3.0	1.7	370	0	303	37
26S 25E 35CCB	67	7.5	10	10	.3	.6	130	0	107	13

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
23S 22E 29AAA	140	27	.1	10	640	9.7	.01	0	200	2
26S 24E 29BBB	520	48	.4	16	1250	19	.02	0	0	6
26S 25E 35CCB	74	17	.3	10	280	6.2	.00	0	0	3

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
23S 22E 29AAA	0	0	0	40	0	.0	9	0	10
26S 24E 29BBB	0	30	0	60	0	.0	4	0	5200
26S 25E 35CCB	0	20	80	0	0	.0	0	0	2400

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

BUTLER COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
23S 3E 17ACC	380303097072701	60	--	77-07-07	1880	8.0	19.0	1200	870
23S 7E 23BCC	380212096383001	80	--	77-06-30	770	7.0	18.0	310	0
24S 3E 17ACC	375749097072701	40	--	77-07-07	970	6.9	18.0	430	130
24S 4E 29DBA2	375558097003902	710	--	77-08-15	2580	7.1	23.0	1550	1200
26S 4E 8DCD	374749097004401	--	--	77-08-15	1630	7.2	18.5	671	310
27S 4E 22BAC	374130096585601	30	--	77-03-31	794	6.7	11.0	390	46
27S 6E 22BAA3	374135096460503	80	--	77-08-15	517	6.6	17.5	269	33
28S 3E 30AAD	373526097080101	42	--	77-07-13	1480	7.4	20.0	1040	840
29S 4E 20DAA	373046097002201	125	--	77-03-31	105	6.9	16.0	400	76
29S 7E 11AAA	373251096372801	68	--	77-07-13	800	7.6	22.0	33	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
23S 3E 17ACC	350	60	42	7	.5	2.0	620	0	509	9.9
23S 7E 23BCC	62	37	32	18	.8	1.0	380	0	312	61
24S 3E 17ACC	120	33	38	16	.8	1.0	380	0	312	77
24S 4E 29DBA2	470	93	160	18	1.8	3.6	410	0	336	52
26S 4E 8DCD	170	62	140	31	2.3	1.9	430	0	353	43
27S 4E 22BAC	110	28	42	19	.9	.6	420	0	344	136
27S 6E 22BAA3	92	9.5	20	14	.5	1.2	300	0	246	121
28S 3E 30AAD	300	70	45	9	.6	2.0	--	--	--	--
29S 4E 20DAA	96	38	120	40	2.6	2.0	390	0	320	79
29S 7E 11AAA	6.5	4.0	200	93	15	.7	220	0	180	8.8

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
23S 3E 17ACC	840	43	.6	18	--	1540	2.8	.01	0	0
23S 7E 23BCC	29	26	.3	10	395	392	1.7	.08	0	100
24S 3E 17ACC	140	19	.4	13	595	609	13	.00	0	190
24S 4E 29DBA2	1200	200	.7	13	--	2300	1.3	.06	0	0
26S 4E 8DCD	200	270	.4	19	--	1100	6.7	.11	0	100
27S 4E 22BAC	51	43	.2	18	512	506	1.3	.04	0	200
27S 6E 22BAA3	31	30	.1	21	--	360	3.3	.16	0	100
28S 3E 30AAD	830	33	.6	14	--	1050	.90	.00	0	0
29S 4E 20DAA	77	180	.6	19	720	726	.32	.05	0	100
29S 7E 11AAA	120	93	1.4	7.5	555	556	3.3	.00	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
23S 3E 17ACC	2	0	0	20	0	0	.0	3	0	10
23S 7E 23BCC	0	0	0	0	0	0	--	2	0	0
24S 3E 17ACC	0	0	0	10	0	0	.0	2	0	0
24S 4E 29DBA2	3	0	10	10	20	10	2.0	7	0	0
26S 4E 8DCD	0	0	0	10	0	0	.0	6	0	10
27S 4E 22BAC	0	0	0	--	0	--	.0	4	0	100
27S 6E 22BAA3	0	0	10	10	0	0	.0	1	0	10
28S 3E 30AAD	6	0	0	40	20	10	.0	5	0	10
29S 4E 20DAA	0	0	0	--	0	--	.0	3	0	0
29S 7E 11AAA	0	0	0	350	0	0	.0	1	0	30

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CHASE COUNTY

LOCAL IDENTIFIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
19S 7E 27CBD	382202096385601	50	--	77-06-29	1700	7.7	20.0	710	260
19S 8E 20AAA	382327096321801	57	--	77-06-29	1110	6.6	18.0	590	260
22S 8E 5CCA	380944096331101	55	--	77-06-30	670	6.8	16.0	460	95

LOCAL IDENTIFIER	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
19S 7E 27CBD	200	53	100	23	1.6	1.0	570	0	468	18
19S 8E 20AAA	160	45	30	10	.5	2.0	440	0	361	177
22S 8E 5CCA	150	24	22	9	.4	1.0	440	0	361	112

LOCAL IDENTIFIER	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ARSENIC (AS) (UG/L)	DISSOLVED BARIUM (BA) (UG/L)
19S 7E 27CBD	40	380	.3	17	--	1000	.00	.06	0	100
19S 8E 20AAA	240	69	.2	22	770	789	.10	.36	0	0
22S 8E 5CCA	87	43	.2	22	560	577	2.5	.21	0	100

LOCAL IDENTIFIER	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	DISSOLVED SILVER (AG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
19S 7E 27CBD	18	0	0	10	0	1000	1	0	9300
19S 8E 20AAA	4	0	0	590	20	3300	1	0	120
22S 8E 5CCA	2	0	0	20	0	0	3	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CHEYENNE COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
1S 38W 8DCC	395029101362501	33	112ALVM	77-08-09	1120	7.3	14.0	425	150
4S 39W 15CCA	394205101413101	275	121OGLL	77-08-09	470	7.7	16.0	160	0
4S 41W 16DAA	394218101551201	38	112ALVM	77-08-10	630	7.5	13.0	238	2
5S 38W 22ACB	393625101342401	270	121OGLL	77-08-10	430	7.8	15.0	153	0
5S 42W 14CBC	393658102003601	221	121OGLL	77-08-10	370	7.7	16.0	148	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
1S 38W 8DCC	120	33	83	29	1.7	13	320	0	262	26
4S 39W 15CCA	33	19	35	31	1.2	7.4	210	0	172	6.7
4S 41W 16DAA	61	21	40	26	1.1	7.1	280	0	230	14
5S 38W 22ACB	35	16	33	31	1.2	6.2	200	0	164	5.1
5S 42W 14CBC	38	13	23	24	.8	4.9	180	0	148	5.7

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
1S 38W 8DCC	280	38	1.2	32	770	.10	.03	--	0	1
4S 39W 15CCA	32	17	1.6	42	310	3.4	.00	10	0	0
4S 41W 16DAA	34	22	1.1	40	420	11	.02	10	100	0
5S 38W 22ACB	29	18	1.2	41	300	4.2	.01	10	0	0
5S 42W 14CBC	20	11	1.1	40	260	4.9	.01	0	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
1S 38W 8DCC	0	0	80	0	840	.0	--	0	0
4S 39W 15CCA	0	0	0	0	0	.0	2	0	0
4S 41W 16DAA	0	0	0	0	0	.0	3	0	0
5S 38W 22ACB	0	0	0	0	0	.0	2	0	0
5S 42W 14CBC	0	0	0	0	0	.0	2	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CLAY COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
6S 1E 28AC	393354097172401	60	--	77-07-05	660	7.4	16.0	270	40
7S 2E 3CCC	392802097121301	53	112TRRC	77-07-05	850	6.9	18.0	440	130
7S 4E 20ADC	392549096595701	--	--	77-05-18	1680	8.0	15.0	870	620
10S 1E 17DCC	391039097203401	110	211DKOT	77-07-29	125	6.9	18.0	52	8
10S 4E 5CDB	391226097003201	340	--	77-07-06	990	6.7	16.0	430	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
6S 1E 28AC	86	14	39	23	1.0	7.0	320	0	262	20
7S 2E 3CCC	140	25	23	10	.5	15	380	0	312	77
7S 4E 20ADC	200	93	39	9	.6	2.0	410	0	336	6.6
10S 1E 17DCC	16	3.0	12	33	.7	.9	50	0	41	10
10S 4E 5CDB	130	29	49	19	1.0	3.0	390	0	320	125

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
6S 1E 28AC	86	32	.3	30	434	453	.00	.21	20	0
7S 2E 3CCC	180	14	.3	32	620	619	.40	.62	10	100
7S 4E 20ADC	600	47	.9	16	--	1160	3.8	.00	0	8
10S 1E 17DCC	20	10	.2	16	110	106	.80	.02	0	0
10S 4E 5CDB	72	66	.2	24	620	623	13	.05	0	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
6S 1E 28AC	2	0	0	540	0	40	--	0	0	10
7S 2E 3CCC	4	0	0	70	0	180	--	4	0	0
7S 4E 20ADC	5	0	0	10	0	30	--	9	0	1900
10S 1E 17DCC	0	0	30	10	0	10	.0	0	0	20
10S 4E 5CDB	2	0	0	0	0	0	--	1	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CLOUD COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)
5S 1W 26ABD	393538097233201	--	77-04-08	560	7.0	15.0	250	0	83
5S 3W 32DDD	393406097401401	--	77-04-07	700	7.3	15.0	350	33	120
5S 5W 22DAD	393603097512901	--	77-07-28	775	6.9	19.0	330	39	110
7S 2W 15BAD	392656097314101	--	77-07-28	420	6.7	16.0	290	25	96
8S 1W 20DDD	392011097264101	--	77-04-08	500	6.8	15.0	230	12	67
8S 5W 14ACD	392128097503001	--	77-07-29	2300	7.4	19.0	400	340	240

LOCAL IDENT-I-FIER	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
5S 1W 26ABD	11	37	24	1.0	3.0	310	0	254	50	41
5S 3W 32DDD	11	31	16	.7	4.0	380	0	312	30	64
5S 5W 22DAD	12	48	24	1.2	4.0	370	0	303	75	74
7S 2W 15BAD	12	24	15	.6	4.0	320	0	262	102	73
8S 1W 20DDD	14	31	23	.9	4.0	260	0	213	66	67
8S 5W 14ACD	33	260	43	4.2	10	540	0	443	34	240

LOCAL IDENT-I-FIER	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
5S 1W 26ABD	26	.2	26	388	380	.09	.04	0	0	0
5S 3W 32DDD	24	.2	28	489	490	4.5	.04	0	0	0
5S 5W 22DAD	45	.2	22	515	521	5.4	.01	0	100	1
7S 2W 15BAD	10	.2	22	400	349	.00	.00	0	0	0
8S 1W 20DDD	26	.2	21	360	302	5.4	.04	0	0	0
8S 5W 14ACD	460	.2	20	--	1570	16	.06	0	0	4

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
5S 1W 26ABD	0	30	--	0	--	.0	1	0	0
5S 3W 32DDD	0	10	--	0	--	.0	1	0	0
5S 5W 22DAD	0	0	0	0	10	.0	6	0	10
7S 2W 15BAD	0	0	160	0	410	.0	2	0	0
8S 1W 20DDD	0	0	--	0	--	.0	2	0	10
8S 5W 14ACD	0	10	0	20	0	.0	8	0	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

COFFEY COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
21S 15E 16CDD	381305095460801	31	112WSCS	77-08-30	1430	7.0	17.5	516	120
22S 14E 30AAA	380651095541601	20	322SMWN	77-08-30	860	6.9	18.0	393	110

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
21S 15E 16CDD	170	23	110	31	2.1	1.6	470	0	385	75
22S 14E 30AAA	140	9.4	20	10	.4	4.6	350	0	287	70

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
21S 15E 16CDD	290	45	.2	15	920	6.0	.02	0	0	0
22S 14E 30AAA	56	37	.1	10	530	16	.07	0	300	4

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
21S 15E 16CDD	0	0	10	0	20	.0	14	0	80
22S 14E 30AAA	0	0	540	0	10	.0	0	0	160

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

COWLEY COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
31S 7E 32CAD	371823096412201	--	--	77-03-29	774	6.8	15.0	440	67
32S 3E 25BBC	371433097032901	113	--	77-03-30	640	7.6	15.0	260	1
33S 4E 19ADA	371005097012501	--	--	77-03-30	900	6.9	15.0	320	0
34S 3E 7BBB	370650097085201	82	--	77-03-30	1710	7.0	15.0	800	520
34S 3E 26BDA	370359097040501	36	--	77-03-30	1710	7.4	16.0	410	240

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
31S 7E 32CAD	150	15	15	7	.3	.7	450	0	369	114
32S 3E 25BBC	46	24	52	30	1.4	2.0	320	0	262	13
33S 4E 19ADA	86	26	97	39	2.4	2.0	430	0	353	87
34S 3E 7BBB	240	49	130	26	2.0	2.0	340	0	279	54
34S 3E 26BDA	120	26	240	56	5.2	7.0	210	0	172	13

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
31S 7E 32CAD	39	16	.1	27	514	506	4.5	.31	0	100
32S 3E 25BBC	62	25	.1	16	432	424	4.3	.16	0	100
33S 4E 19ADA	87	52	.3	24	614	600	2.9	.17	0	0
34S 3E 7BBB	660	71	.4	15	--	1350	3.2	.04	0	0
34S 3E 26BDA	130	440	.2	14	--	1080	.34	.16	0	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
31S 7E 32CAD	0	0	0	0	.0	3	0	0
32S 3E 25BBC	0	0	0	0	.0	4	0	10
33S 4E 19ADA	0	0	10	0	.0	8	0	270
34S 3E 7BBB	0	0	0	0	.0	2	0	20
34S 3E 26BDA	<10	0	0	0	.0	3	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DICKINSON COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
12S 4E 31AAD	385812097011101	--	--	77-04-26	1030	6.3	17.0	490	170
13S 1E 23DAC	385416097165501	40	--	77-07-11	530	7.0	23.0	280	76
13S 2E 17BDD	385522097140001	--	--	77-05-19	890	7.4	15.0	410	170
16S 3E 3BAC	384136097052401	--	--	77-05-19	1270	8.2	15.0	660	400

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
12S 4E 31AAD	130	39	40	15	.8	3.0	380	0	312	305
13S 1E 23DAC	85	16	16	11	.4	3.0	240	0	197	38
13S 2E 17BDD	100	35	31	15	.7	2.0	280	0	230	18
16S 3E 3BAC	180	49	49	14	.8	3.0	360	0	295	3.6

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
12S 4E 31AAD	170	51	.2	23	672	649	1.2	.08	--	100
13S 1E 23DAC	54	26	.2	26	384	381	8.2	.09	0	0
13S 2E 17BDD	160	39	.2	19	580	577	12	.04	0	100
16S 3E 3BAC	390	44	.3	18	919	939	3.2	.00	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
12S 4E 31AAD	4	0	10	--	0	--	--	7	0	10
13S 1E 23DAC	0	0	10	10	0	0	.0	3	0	0
13S 2E 17BDD	0	0	0	10	0	0	--	2	0	0
16S 3E 3BAC	2	0	0	100	0	60	--	39	0	30

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DOUGLAS COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
14S 19E 32CCC	384650095200301	245	--	77-09-23	1500	7.8	23.0	14	0
14S 20E 10ABB	385020095135401	23	--	77-09-23	690	6.2	18.0	327	61

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
14S 19E 32CCC	4.5	.6	320	98	38	1.6	510	0	418	13
14S 20E 10ABB	120	7.9	11	7	.3	.3	320	0	262	323

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
14S 19E 32CCC	170	35	2.2	7.5	850	.50	.05	0	0	2
14S 20E 10ABB	48	14	.1	13	390	4.1	.00	0	0	2

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
14S 19E 32CCC	0	10	0	0	0	.0	0	0	40
14S 20E 10ABB	0	0	60	0	0	.0	0	0	90

EDWARDS COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)
24S 18W 36DCC	375445099145501	--	77-07-25	580	7.5	16.0	230	0	78
26S 18W 33CDC	374353099175201	--	77-07-25	650	7.6	16.0	250	89	81

LOCAL IDENT-I-FIER	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
24S 18W 36DCC	8.5	32	23	.9	3.0	270	0	221	14	26
26S 18W 33CDC	12	29	20	.8	3.0	190	0	156	7.6	70

LOCAL IDENT-I-FIER	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
24S 18W 36DCC	14	.2	20	354	349	7.6	.02	0	200	0
26S 18W 33CDC	42	.5	29	378	375	3.5	.01	0	0	0

LOCAL DENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
24S 18W 36DCC	0	0	0	0	0	.0	3	0	0
26S 18W 33CDC	0	0	0	0	0	.0	7	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ELLIS COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)
11S 17W 12AAA	390702099085901	--	77-09-21	1100	6.9	10.5	622	380	200
13S 18W 9CBB	385609099200701	--	77-09-21	1100	7.0	10.5	457	180	150
15S 17W 1ADD	384641099091801	--	77-09-21	870	7.0	10.0	373	170	130

LOCAL IDENT-I-FIER	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
11S 17W 12AAA	33	43	13	.7	5.9	450	0	369	91	360
13S 18W 9CBB	19	78	27	1.6	8.1	360	0	295	58	180
15S 17W 1ADD	10	37	10	.8	4.9	280	0	230	45	70

LOCAL IDENT-I-FIER	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)
11S 17W 12AAA	30	.6	20	860	.40	.02	0	300	6	0
13S 18W 9CBB	110	.2	40	770	2.8	.07	0	100	7	0
15S 17W 1ADD	130	.1	27	550	3.2	.06	0	100	4	0

LOCAL IDENT-I-FIER	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
11S 17W 12AAA	10	0	20	0	.0	1	0	50
13S 18W 9CBB	0	10	20	0	.0	3	0	360
15S 17W 1ADD	10	0	0	0	.0	0	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ELLSWORTH COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
14S 10W 19BCC	384917098290201	--	--	77-03-10	1210	7.0	14.0	460	180
15S 8W 20BCD	384401098142301	30	--	77-03-10	550	6.9	14.0	210	2
17S 9W 16DAB	383420098185701	--	--	77-04-25	720	7.8	15.0	260	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
14S 10W 19BCC	160	15	92	30	1.9	5.0	340	0	279	54
15S 8W 20BCD	74	6.7	40	29	1.2	4.0	260	0	213	52
17S 9W 16DAB	83	13	52	30	1.4	4.0	370	0	303	9.4

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
14S 10W 19BCC	130	160	.1	22	798	792	9.0	.09	0	100
15S 8W 20BCD	42	23	.3	22	370	371	7.0	.11	0	0
17S 9W 16DAB	20	65	.4	32	432	452	.02	.00	--	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
14S 10W 19BCC	0	0	0	0	8	0	0
15S 8W 20BCD	0	0	0	0	3	0	0
17S 9W 16DAB	2	0	0	0	2	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

FINNEY COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
21S 32W 8ABD	381453100511001	--	--	77-07-11	1750	7.3	14.0	650	390
23S 31W 30CC	380435100423201	--	--	77-07-15	940	7.4	14.0	380	100
23S 33W 17BBB	380339100582401	220	121OGLL	77-06-29	1120	7.6	17.0	490	320
24S 33W 14BCB	375812100550701	2054	--	77-06-17	300	7.5	16.0	1500	1300
24S 33W 19DBD	375700100584901	714	--	77-04-22	415	7.3	19.5	--	--
24S 34W 5AAB	380010101040601	--	--	77-07-07	3700	7.1	16.0	1700	1500

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
21S 32W 8ABD	140	77	120	2.0	10	320	0	262	26	490
23S 31W 30CC	94	35	42	.9	7.0	240	0	197	15	150
23S 33W 17BBB	110	49	47	.9	7.0	200	0	164	8.0	300
24S 33W 14BCB	300	140	430	4.0	11	250	0	205	13	2000
24S 33W 19DBD	--	--	--	--	--	180	0	148	14	--
24S 34W 5AAB	400	170	260	2.7	14	210	0	172	27	1800

LOCAL IDENT-I-FIER	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL RESI-DUE (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
21S 32W 8ABD	80	2.3	41	--	1150	--	5.5	.01	10	0
23S 31W 30CC	80	1.7	50	604	608	--	6.7	.00	0	0
23S 33W 17BBB	74	.9	23	731	727	--	4.0	.00	0	0
24S 33W 14BCB	160	.7	16	--	3280	--	12	.01	0	0
24S 33W 19DBD	--	--	--	--	--	311	--	--	--	--
24S 34W 5AAB	180	1.2	26	--	2980	--	6.0	.01	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
21S 32W 8ABD	0	0	0	20	20	0	.0	32	0	0
23S 31W 30CC	0	0	0	10	0	0	.0	14	0	0
23S 33W 17BBB	0	0	0	0	0	0	--	16	0	0
24S 33W 14BCB	2	0	10	10	60	0	--	26	0	0
24S 33W 19DBD	--	--	--	--	--	--	--	--	--	--
24S 34W 5AAB	5	0	0	10	50	0	.0	20	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED URANIUM (U) (UG/L)
21S 32W 8ABD	--	--	--	--	--	--	--	--
23S 31W 30CC	--	--	--	--	--	--	--	--
23S 33W 17BBB	--	--	--	--	--	--	--	--
24S 33W 14BCB	--	--	--	--	--	--	--	--
24S 33W 19DBD	21	<.4	9.9	<.4	7.9	<.4	1.0	1.0
24S 34W 5AAB	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

FRANKLIN COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
15S 18E 34BAA	384232095240001	246	321TNGX	77-09-28	1320	6.5	22.0	520	170
17S 21E 21CCC	383302095060601	58	112TRRC	76-10-14	1240	7.1	16.5	440	120
18S 18E 8ADA	383008095261001	280	321TNGX	77-09-28	6000	6.7	21.0	131	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
15S 18E 34BAA	150	36	91	27	1.7	2.9	430	0	353	218
17S 21E 21CCC	140	22	56	22	1.2	.4	340	0	300	43
18S 18E 8ADA	31	13	1090	94	41	6.7	280	0	230	89

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
15S 18E 34BAA	380	14	.3	23	--	915	.10	.00	0	0
17S 21E 21CCC	85	100	.2	21	624	601	2.1	.05	--	0
18S 18E 8ADA	110	1580	.4	9.0	--	2980	1.0	.00	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
15S 18E 34BAA	3	0	0	5900	20	60	.0	0	0	60
17S 21E 21CCC	0	0	0	--	0	--	.0	0	0	0
18S 18E 8ADA	4	0	0	0	60	0	.0	1	0	690

GEARY COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
10S 5E 18DCC	391036096544001	110	--	77-04-26	780	6.7	15.0	360	0
12S 5E 18BA3	390238096494403	53	--	77-04-26	650	6.8	15.5	250	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
10S 5E 18DCC	100	26	50	23	1.2	4.0	420	0	344	134
12S 5E 18BA3	69	18	47	28	1.3	11	250	0	205	63

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
10S 5E 18DCC	83	18	.2	24	526	512	.02	.00
12S 5E 18BA3	89	42	.3	11	415	411	.02	.05

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

GOVE COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
13S 27W 25ABB	385405100160301	87	121OGLL	77-07-14	1420	7.6	16.0	610	340
13S 29W 4BAC2	385726100325502	65	112ALVM	77-07-14	1420	7.3	15.0	550	220
15S 29W 13CCB	384447100295801	100	112ALVM	77-07-14	1850	7.2	16.0	850	650
15S 29W 18DB	384458100345501	90	112TRRC	77-07-14	3500	7.2	14.0	1600	1300

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
13S 27W 25ABB	190	35	71	20	1.2	12	330	0	271	13
13S 29W 4BAC2	150	42	87	25	1.6	19	390	0	320	31
15S 29W 13CCB	240	62	81	17	1.2	18	240	0	197	24
15S 29W 18DB	340	170	250	26	2.8	26	370	0	303	37

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
13S 27W 25ABB	400	65	.5	33	972	974	1.1	.03	0	0
13S 29W 4BAC2	330	65	.8	38	935	930	1.2	.08	10	0
15S 29W 13CCB	750	58	1.3	29	--	1360	.10	.03	20	0
15S 29W 18DB	1700	60	1.3	40	--	2740	.00	.03	20	0

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
13S 27W 25ABB	0	0	0	10	20	140	.0	24	0	90
13S 29W 4BAC2	0	0	0	860	20	230	.0	10	0	0
15S 29W 13CCB	0	0	0	4700	40	340	.0	0	0	10
15S 29W 18DB	2	0	0	8400	80	520	.0	2	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

GRAY COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
24S 29W 18CCB	375736100331301	--	121OGLL	77-06-30	840	7.6	17.0	360	160
27S 30W 23BB	374126100343401	135	121OGLL	77-07-08	660	7.5	16.0	290	96

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
24S 29W 18CCB	75	38	28	15	.7	6.0	230	0	189	9.2
27S 30W 23BB	93	14	28	17	.7	4.0	280	0	230	14

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
24S 29W 18CCB	120	66	1.9	39	506	512	5.7	.01	0	0
27S 30W 23BB	52	34	.2	21	419	416	7.2	.01	0	0

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
24S 29W 18CCB	0	0	0	10	0	0	--	11	0	0
27S 30W 23BB	2	0	0	0	0	0	.0	10	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

GREELEY COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
16S 39W 22DCB	383841101363801	163	121OGLL	77-07-12	520	7.9	14.0	200	35
16S 41W 20BAD	383915101522901	250	121OGLL	77-06-22	630	7.8	17.0	270	110
16S 42W 8DDC	384021101584801	109	--	77-08-08	390	7.4	15.0	156	0
17S 40W 15CCB	383418101435701	200	121OGLL	77-07-12	560	7.8	14.0	210	70

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
16S 39W 22DCB	47	20	30	24	.9	5.0	190	0	156	3.0
16S 41W 20BAD	60	29	30	19	.8	5.0	180	0	148	4.6
16S 42W 8DDC	38	15	21	22	.7	3.0	180	0	148	11
17S 40W 15CCB	5.2	21	29	30	1.3	4.0	170	0	139	4.3

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
16S 39W 22DCB	68	18	1.6	36	338	333	3.1	.01	10	0
16S 41W 20BAD	100	41	1.0	34	435	426	8.4	.01	10	0
16S 42W 8DDC	20	15	1.4	21	--	240	3.1	.00	0	0
17S 40W 15CCB	85	26	1.2	41	363	312	3.5	.01	10	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
16S 39W 22DCB	0	0	0	20	0	0	.0	6	0	0
16S 41W 20BAD	0	0	0	0	0	0	--	7	0	0
16S 42W 8DDC	0	0	0	0	0	0	.0	2	0	0
17S 40W 15CCB	0	0	0	10	0	0	.0	7	0	0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

GREENWOOD COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
22S 13E 20DDC	380650095595501	12	112PCIS	77-08-30	757	7.1	17.5	300	0
25S 13E 30CCA	375023096013901	27	322SMNN	77-08-30	472	6.6	18.0	161	70
26S 10E 4CCC	374839096192301	25	112ALVM	77-08-30	768	7.2	18.5	325	40

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
22S 13E 20DDC	94	16	14	9	.4	.4	380	0	312	48
25S 13E 30CCA	43	13	24	24	.8	.3	110	0	90	44
26S 10E 4CCC	109	13	13	8	.3	.3	340	0	279	34

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
22S 13E 20DDC	5.8	15	.1	16	352	.10	.00	0	0	0
25S 13E 30CCA	78	19	.1	18	288	6.3	.00	0	0	1
26S 10E 4CCC	48	24	.1	12	390	.80	.01	0	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
22S 13E 20DDC	0	0	270	0	2200	.0	0	0	210
25S 13E 30CCA	0	10	170	20	0	.8	0	0	400
26S 10E 4CCC	0	10	0	0	0	.0	0	0	30

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

HAMILTON COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)
21S 40W 31CCC	381033101453701	--	77-08-26	650	7.5	25.0	62	0	14
23S 42W 19CBB	380210101584801	112ALVM	77-08-04	2600	6.9	18.0	2000	1600	480
24S 39W 30BBD	375624101385301	112ALVM	77-08-26	3600	7.2	16.0	1260	1010	300

LOCAL IDENT-I-FIER	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
21S 40W 31CCC	6.6	120	79	6.6	5.1	230	0	189	12	130
23S 42W 19CBB	190	650	41	6.4	20	420	0	344	85	2600
24S 39W 30BBD	130	400	40	4.9	10	280	0	230	28	1700

LOCAL IDENT-I-FIER	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)
21S 40W 31CCC	15	1.4	10	410	.00	.00	0	0	0	0
23S 42W 19CBB	280	1.2	30	4540	7.8	.02	0	0	6	0
24S 39W 30BBD	130	1.2	15	2840	1.4	.00	0	0	2	0

LOCAL IDENT-I-FIER	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
21S 40W 31CCC	0	840	0	0	.0	0	0	10
23S 42W 19CBB	10	20	80	10	.0	29	10	0
24S 39W 30BBD	10	20	20	0	.0	25	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

HARPER COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
32S 7W 2CDA	371706098025801	--	--	77-03-01	520	7.1	15.0	210	0
32S 8W 20BCD	371449098125601	--	--	77-03-02	640	7.0	16.0	310	76
33S 7W 28DCD	370820098044901	--	--	77-03-01	910	7.0	8.0	280	120
34S 5W 17DAD	370507097523301	40	--	77-03-02	970	7.0	13.0	300	0

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
32S 7W 2CDA	61	13	39	29	1.2	1.0	240	0	197	31
32S 8W 20BCD	88	23	48	25	1.7	2.0	280	0	230	45
33S 7W 28DCD	74	23	86	40	2.2	4.0	210	0	172	34
34S 5W 17DAD	70	30	110	44	2.8	2.0	430	0	353	69

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
32S 7W 2CDA	31	27	.3	21	344	337	5.6	.12	0	100
32S 8W 20BCD	98	59	.4	32	494	489	.00	.33	10	100
33S 7W 28DCD	86	150	.4	10	538	540	.59	.19	0	100
34S 5W 17DAD	99	55	.1	26	605	617	2.9	.17	10	0

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
32S 7W 2CDA	0	0	0	0	1	0	0
32S 8W 20BCD	0	0	0	0	2	0	0
33S 7W 28DCD	0	0	10	0	2	0	0
34S 5W 17DAD	0	0	0	0	10	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

HARVEY COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
22S 1W 30DCC	380608097281201	48	--	77-03-17	1290	6.8	14.5	440	73
22S 2W 22ABD	380739097312301	--	--	77-09-08	445	6.7	16.5	235	23
23S 1W 32BBC	380041097273701	133	--	77-07-14	370	6.6	20.0	150	9
23S 2W 29CDD	380054097334901	236	112MCPR	77-08-16	340	7.3	19.0	122	0
23S 3W 29DBD	380107097400901	--	--	77-08-16	1410	6.9	20.0	400	250
24S 2W 23BBB	375718097305601	--	--	77-08-16	946	7.2	19.5	432	250

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
22S 1W 30DCC	140	22	87	30	1.8	2.0	430	0	353	109
22S 2W 22ABD	79	9.1	25	19	.7	1.1	270	0	221	86
23S 1W 32BBC	48	8.0	19	21	.7	2.0	180	0	148	72
23S 2W 29CDD	40	5.5	20	36	1.1	2.1	180	0	148	14
23S 3W 29DBD	110	28	140	43	3.1	5.0	170	0	139	34
24S 2W 23BBB	140	20	59	23	1.2	3.4	220	0	180	22

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
22S 1W 30DCC	54	96	.1	27	752	750	25	.08	10	100
22S 2W 22ABD	26	38	.2	24	--	340	1.1	.06	10	0
23S 1W 32BBC	25	10	.3	26	246	247	5.0	.22	10	100
23S 2W 29CDD	15	12	.3	22	--	220	.40	.21	10	100
23S 3W 29DBD	62	340	.2	21	--	820	3.8	.12	0	300
24S 2W 23BBB	350	17	.4	18	--	720	.10	.01	10	100

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
22S 1W 30DCC	0	0	10	--	20	--	--	2	0	10
22S 2W 22ABD	0	0	0	0	20	0	.0	0	0	0
23S 1W 32BBC	0	0	0	0	0	0	.0	2	0	10
23S 2W 29CDD	0	0	0	0	0	260	.0	0	0	0
23S 3W 29DBD	1	0	0	40	0	10	.8	1	0	0
24S 2W 23BBB	0	0	0	3000	0	610	.7	0	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

HASKELL COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA+MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
27S 31W 24CDC	374044100395001	206	121OGLL	77-07-08	540	7.5	16.0	240	74
27S 32W 6CAB	374343100520001	298	121OGLL	77-07-08	350	7.7	18.0	150	2
30S 34W 13ACC1	372621100592001	500	121OGLL	77-09-23	780	7.8	19.5	290	110

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	PERCENT SODIUM	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
27S 31W 24CDC	78	12	19	.5	14	3.0	200	0	56	32
27S 32W 6CAB	46	8.0	20	.7	22	2.0	170	0	33	8.0
30S 34W 13ACC1	70	27	49	1.3	27	4.0	220	0	170	17

LOCAL IDENT-I-FIER	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
27S 31W 24CDC	.2	20	347	--	5.4	.02	--	--	0	0
27S 32W 6CAB	.2	21	235	--	2.0	.00	--	--	0	0
30S 34W 13ACC1	1.1	25	470	.64	--	--	1	1	0	--

LOCAL IDENT-I-FIER	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)
27S 31W 24CDC	--	--	0	--	--	0	--	--	--	--
27S 32W 6CAB	--	--	0	--	--	0	--	--	--	--
30S 34W 13ACC1	10	7	3	10	10	0	<50	<50	0	10

LOCAL IDENT-I-FIER	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
27S 31W 24CDC	--	0	--	0	--	--	0	--	--	0
27S 32W 6CAB	--	0	--	0	--	--	0	--	--	0
30S 34W 13ACC1	8	2	0	20	<100	<67	3	10	10	0

LOCAL IDENT-I-FIER	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
27S 31W 24CDC	--	--	.0	--	--	7	0	--	--	0
27S 32W 6CAB	--	--	.0	--	--	2	0	--	--	0
30S 34W 13ACC1	.0	.0	.4	5	2	3	--	20	10	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

JEWELL COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
2S 9W 23BAC	395209098180001	--	--	77-02-23	1570	6.8	10.5	760	530
3S 6W 21CAB	394636098000201	50	--	77-02-23	1720	6.8	8.0	660	310
4S 8W 25DAB2	394030098093302	52	--	77-02-23	1270	7.2	9.5	470	160

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
2S 9W 23BAC	250	32	39	10	.6	11	310	0	254	79
3S 6W 21CAB	220	27	170	36	2.9	7.0	470	0	385	119
4S 8W 25DAB2	160	18	64	22	1.3	5.0	470	0	385	47

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
2S 9W 23BAC	500	15	.6	35	--	1110	22	.09	0	0
3S 6W 21CAB	400	120	.2	21	--	1320	32	.02	0	--
4S 8W 25DAB2	210	49	.2	27	756	799	7.7	.09	0	0

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
2S 9W 23BAC	0	0	10	20	90	0	30
3S 6W 21CAB	0	0	--	20	--	0	27
4S 8W 25DAB2	0	0	10	0	15	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

KEARNY COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
23S 35W 25BAB	380153101071301	--	--	77-08-25	2010	7.0	17.0	1030	860
23S 37W 28CCB	380108101234301	300	121OGLL	77-08-25	600	7.7	19.0	237	91
25S 36W 28BAD	375115101165801	362	112PCPC	77-08-04	690	7.5	17.0	310	160
26S 37W 21DDD	374557101215101	330	112ALVM	77-08-04	600	7.7	16.0	240	20

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
23S 35W 25BBB	320	60	110	18	1.5	10	210	0	172	34
23S 37W 28CCB	49	28	33	23	.9	5.6	170	0	139	5.4
25S 36W 28BBD	97	17	25	15	.6	3.0	170	0	139	8.6
26S 37W 21DDD	60	23	37	24	1.0	5.0	260	0	213	8.3

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
23S 35W 25BAB	910	120	.4	25	--	1680	4.7	.00	0	0
23S 37W 28CCB	97	44	.9	22	--	390	4.1	.00	0	0
25S 36W 28BBD	160	25	.4	16	470	469	9.4	.01	0	100
26S 37W 21DDD	80	15	.9	22	390	383	2.7	.01	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
23S 35W 25BBB	0	0	10	0	0	0	.0	24	0	0
23S 37W 28CCB	0	0	0	0	0	0	.0	11	0	0
25S 36W 28BBD	0	0	0	0	0	0	.0	6	0	0
26S 37W 21DDD	0	0	0	0	0	0	.0	4	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

KINGMAN COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
27S 10W 32DCC	373846098255701	60	112ODID	77-08-03	470	6.8	18.0	220	35
30S 5W 12CCA	372659097491801	633	112HLDG	77-08-02	290	6.2	20.0	96	10
30S 9W 10ADC	372658098170301	--	--	77-08-03	210	6.8	21.0	200	30

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
27S 10W 32DCC	78	6.5	13	11	.4	1.0	260	0	213	66
30S 5W 12CCA	27	7.0	21	32	.9	2.0	130	0	107	131
30S 9W 10ADC	68	7.5	18	16	.6	.9	180	0	148	46

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
27S 10W 32DCC	16	16	.2	19	301	319	8.9	.03	0	500
30S 5W 12CCA	11	26	.2	27	190	204	4.2	.23	0	300
30S 9W 10ADC	22	14	.2	22	296	285	9.7	.04	0	500

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
27S 10W 32DCC	1	0	150	140	20	0	.0	0	0	670
30S 5W 12CCA	0	0	0	20	0	10	.0	0	0	10
30S 9W 10ADC	0	0	10	10	0	0	1.0	0	0	0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

KIOWA COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
27S 20W 26ABD	374001099282201	95	--	77-07-27	390	7.6	17.0	180	16
28S 16W 2CCA	373759099024101	--	--	77-07-27	280	7.3	16.0	120	9
28S 18W 19CCB	373517099201701	--	--	77-07-26	570	7.5	16.0	260	53
28S 19W 5AAC	373822099245701	--	--	77-07-27	420	7.5	16.0	190	22
28S 19W 31BBB	373407099265001	--	--	77-07-26	510	7.5	16.0	220	28

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
27S 20W 26ABD	63	5.5	13	13	.4	2.0	200	0	164	8.0
28S 16W 2CCA	42	4.5	11	16	.4	3.0	140	0	115	11
28S 18W 19CCB	89	10	18	13	.5	3.0	250	0	205	13
28S 19W 5AAC	62	8.5	16	15	.5	3.0	200	0	164	10
28S 19W 31BBB	70	12	17	14	.5	3.0	230	0	189	12

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
27S 20W 26ABD	13	10	.2	24	258	259	6.5	.03	0	600
28S 16W 2CCA	6.0	10	.4	26	195	191	4.3	.09	0	0
28S 18W 19CCB	38	32	.2	24	361	350	4.6	.03	0	200
28S 19W 5AAC	21	12	.4	24	280	278	7.3	.08	0	100
28S 19W 31BBB	21	25	.2	27	315	311	5.0	.02	0	100

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
27S 20W 26ABD	0	0	0	0	0	0	.0	0	0	0
28S 16W 2CCA	0	0	0	0	0	0	.0	0	0	0
28S 18W 19CCB	0	0	0	0	0	0	.0	5	0	0
28S 19W 5AAC	0	0	0	0	0	0	.0	1	0	0
28S 19W 31BBB	0	0	0	0	0	0	.0	2	0	0

LABETTE COUNTY

LOCAL IDENTIFIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
31S 21E 20AAB	372020095072901	30	112TRRC	76-10-27	1960	7.2	15.0	680	340

LOCAL IDENTIFIER	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
31S 21E 20AAB	190	49	140	31	2.3	1.0	420	0	370	42

LOCAL IDENTIFIER	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ARSENIC (AS) (UG/L)	DISSOLVED BARIUM (BA) (UG/L)
31S 21E 20AAB	470	71	.2	18	1170	1170	5.9	.06	0	0

LOCAL IDENTIFIER	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	DISSOLVED SILVER (AG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
31S 21E 20AAB	0	0	0	0	.0	0	0	110

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

LANE COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
16S 29W 26CCC	383743100300801	--	121OGLL	77-07-13	560	7.7	14.0	240	51
17S 27W 20CCC	383320100201101	--	121OGLL	77-07-13	530	7.6	14.5	230	41
18S 28W 18ACC	382925100271801	104	121OGLL	77-07-13	850	7.6	13.0	370	130
18S 30W 2AAA	383130100354301	130	121OGLL	77-07-13	940	7.4	13.5	380	160

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
16S 29W 26CCC	58	23	23	17	.6	6.0	220	0	180	7.0
17S 27W 20CCC	58	21	20	15	.6	5.0	220	0	180	8.8
18S 28W 18ACC	76	44	26	13	.6	8.0	290	0	238	12
18S 30W 2AAA	85	41	40	18	.9	8.0	260	0	213	17

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
16S 29W 26CCC	55	30	2.2	54	380	376	3.6	.01	10	100
17S 27W 20CCC	47	23	2.6	55	360	354	3.2	.01	10	0
18S 28W 18ACC	84	60	3.0	68	538	535	5.2	.01	10	0
18S 30W 2AAA	160	60	2.6	55	604	600	4.5	.02	10	0

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
16S 29W 26CCC	1	0	0	20	0	0	.0	5	0	0
17S 27W 20CCC	1	0	0	20	0	0	.0	5	0	0
18S 28W 18ACC	1	0	0	10	0	0	.0	5	0	0
18S 30W 2AAA	1	0	0	30	0	0	.0	12	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

LINCOLN COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA+MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
10S 7W 12ACA	391201098024901	--	--	77-02-24	1440	7.1	14.0	350	0
12S 6W 15AAC	390048097580801	60	--	77-02-25	1290	6.9	10.0	580	190
12S 8W 10DD	390153098090501	--	--	77-02-25	1230	7.1	14.0	540	200
12S 10W 14ACB	390042098240001	--	--	77-02-25	845	7.1	14.0	370	92

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
10S 7W 12ACA	110	20	200	54	4.6	8.0	580	0	476	74
12S 6W 15AAC	190	23	86	24	1.5	6.0	550	0	451	111
12S 8W 10DD	190	19	85	25	1.6	4.0	460	0	377	58
12S 10W 14ACB	130	12	47	19	.9	4.0	360	0	295	46

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
10S 7W 12ACA	180	97	.2	34	924	948	1.3	2.3	0	100
12S 6W 15AAC	150	120	.2	31	911	947	14	3.3	0	0
12S 8W 10DD	250	74	.2	27	869	896	4.5	.06	0	0
12S 10W 14ACB	73	60	.2	24	547	556	7.5	.08	0	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
10S 7W 12ACA	0	0	78	0	4	0	40
12S 6W 15AAC	0	0	0	0	28	0	10
12S 8W 10DD	0	0	0	20	20	0	0
12S 10W 14ACB	0	0	0	0	6	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

LYON COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)
18S 11E 23BAD	382433096094801	--	77-06-30	160	7.6	23.0	59	21	23

LOCAL IDENT-I-FIER	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
18S 11E 23BAD	.5	10	25	.6	4.0	120	0	98	4.8	9.0

LOCAL IDENT-I-FIER	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
18S 11E 23BAD	26	.1	10	105	144	.40	.01	0	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
18S 11E 23BAD	0	0	10	0	0	0	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MARION COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
19S 1E 4ABC	382555097192801	120	--	77-07-08	300	6.4	18.0	110	0
19S 1E 4ACC	382542097192801	67	--	77-07-08	420	6.7	17.5	160	0
19S 2E 35ABA	382141097103101	75	--	77-07-01	990	7.3	18.0	530	22
21S 1E 7BAA	381444097214401	50	121OGLL	77-07-01	720	7.6	19.0	260	0
22S 3E 4BCC	381002097065401	105	--	77-07-01	1300	7.0	16.5	800	510
22S 5E 33CAA	380535096531401	155	121OGLL	77-06-30	700	7.1	20.0	350	58

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
19S 1E 4ABC	33	5.5	21	30	.9	2.0	130	0	107	83
19S 1E 4ACC	52	6.5	36	33	1.3	1.0	200	0	164	64
19S 2E 35ABA	140	45	28	10	.5	2.0	410	0	336	33
21S 1E 7BAA	83	13	69	36	1.9	2.0	400	0	328	16
22S 3E 4BCC	230	57	40	10	.6	2.0	390	0	320	62
22S 5E 33CAA	66	45	33	17	.8	1.0	370	0	303	47

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
19S 1E 4ABC	27	12	.3	16	190	182	.20	2.1	0	0
19S 1E 4ACC	32	19	.3	16	285	287	5.7	.06	0	100
19S 2E 35ABA	250	18	.5	15	687	710	2.1	.00	0	0
21S 1E 7BAA	38	28	.7	21	468	467	3.9	.02	0	100
22S 3E 4BCC	490	43	.5	17	--	1050	.10	.00	0	0
22S 5E 33CAA	54	40	.7	16	470	476	8.5	.01	0	100

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
19S 1E 4ABC	0	0	0	50	0	500	.0	0	0	20
19S 1E 4ACC	0	0	0	210	0	10	.0	1	0	10
19S 2E 35ABA	2	0	0	10	0	0	--	21	0	0
21S 1E 7BAA	2	0	10	0	0	10	--	2	0	0
22S 3E 4BCC	3	0	0	160	0	10	--	100	0	10
22S 5E 33CAA	2	0	0	0	0	0	--	1	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MARSHALL COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
1S 9E 10HC	395927096213401	83	--	77-05-11	1360	7.7	14.0	740	430
2S 7E 32AAA	395027096392401	40	--	77-05-12	1600	6.9	15.0	590	250
2S 9E 20DDA	395131096253601	--	--	77-05-11	870	7.2	13.5	300	46
4S 6E 16DAC	394205096451601	55	--	77-05-12	760	6.7	17.0	280	63
4S 7E 20DCC	394100096395001	50	--	77-05-11	950	7.2	17.0	410	110
4S 9E 16AAA	394237096242901	127	--	77-05-12	550	7.1	14.0	250	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
1S 9E 10BC	180	73	61	15	1.0	4.0	560	0	459	18
2S 7E 32AAA	140	58	51	16	.9	6.0	530	0	435	107
2S 9E 20DDA	5.2	4.0	4.0	21	.3	2.0	400	0	328	40
4S 6E 16DAC	69	25	17	12	.4	6.0	420	0	344	134
4S 7E 20DCC	120	28	16	8	.3	2.0	370	0	303	37
4S 9E 16AAA	79	13	32	22	.9	2.0	310	0	254	.39

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
1S 9E 10BC	370	80	1.2	21	--	1040	11	.02	0	0
2S 7E 32AAA	200	100	.2	31	820	879	6.9	.04	0	0
2S 9E 20DDA	100	23	.2	16	435	363	2.5	.02	0	0
4S 6E 16DAC	65	27	.2	27	380	458	3.3	.17	0	100
4S 7E 20DCC	98	19	.3	19	508	510	5.7	.09	0	100
4S 9E 16AAA	23	16	.2	28	373	363	3.8	.06	0	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
1S 9E 10HC	2	0	20	40	0	0	90	0	40
2S 7E 32AAA	2	0	0	250	0	1400	1	0	0
2S 9E 20DDA	2	0	220	340	0	10	6	0	0
4S 6E 16DAC	0	0	10	50	0	40	4	0	0
4S 7E 20DCC	2	0	0	10	0	0	1	0	0
4S 9E 16AAA	0	0	10	40	0	20	0	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MCPHERSON COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
17S 3W 17DBD	383413097402001	86	--	77-04-12	1090	7.4	14.0	540	0
17S 5W 23DAB	383328097500901	41	--	77-04-04	1050	7.0	15.5	490	120
18S 3W 14BDD	382913097371801	--	--	77-03-16	860	6.6	13.5	390	0
19S 1W 32AAC	382136097265601	103	--	77-04-13	695	7.0	15.0	290	0
19S 3W 29DBA2	382208097402002	160	--	77-04-13	730	6.7	15.0	360	0
21S 2W 29BBA	381207097341001	139	--	77-04-13	455	6.9	15.0	210	0
21S 3W 2DCD	381451097365701	--	--	77-03-16	1520	6.4	15.0	480	240
21S 4W 11DCC	381359097434401	92	--	77-04-13	705	6.9	14.5	330	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
17S 3W 17DBD	160	33	55	18	1.0	11	540	0	443	34
17S 5W 23DAB	170	19	53	18	1.0	6.0	420	0	344	67
18S 3W 14BDD	120	23	69	27	1.5	2.0	520	0	427	209
19S 1W 32AAC	100	8.5	58	30	1.5	3.0	370	0	303	59
19S 3W 29DBA2	130	12	17	9	.4	2.0	340	0	279	109
21S 2W 29BBA	70	8.0	22	19	.7	2.0	230	0	189	46
21S 3W 2DCD	160	18	71	24	1.4	3.0	280	0	230	178
21S 4W 11DCC	110	16	31	16	.7	2.0	380	0	312	77

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
17S 3W 17DBD	170	88	.2	26	770	812	.43	.15	0	0
17S 5W 23DAB	120	46	.2	26	737	722	17	.08	0	100
18S 3W 14BDD	32	63	.1	32	601	599	.18	.23	10	100
19S 1W 32AAC	41	41	.2	25	476	464	.66	.65	20	100
19S 3W 29DBA2	23	64	.1	26	461	464	5.0	.08	0	200
21S 2W 29BBA	19	28	.2	26	308	307	4.1	.18	0	300
21S 3W 2DCD	78	160	.1	30	808	789	29	.23	0	300
21S 4W 11DCC	48	36	.1	27	455	462	.93	.26	10	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
17S 3W 17DBD	2	0	20	0	.0	5	0	50
17S 5W 23DAB	<10	0	20	0	.0	8	0	50
18S 3W 14BDD	0	0	50	20	--	1	0	0
19S 1W 32AAC	0	0	10	0	.0	1	0	10
19S 3W 29DBA2	0	120	10	0	.0	2	0	60
21S 2W 29BBA	0	0	0	0	.0	1	0	0
21S 3W 2DCD	0	0	20	0	--	10	0	270
21S 4W 11DCC	0	0	0	0	.0	6	0	0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MITCHELL COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
6S 9W 26CAD	392958098173401	40	--	77-02-24	980	7.0	13.0	340	0
8S 6W 18DA	392319097562101	--	--	77-02-23	1080	7.4	13.0	480	140
8S 10W 19ADA	392044098281801	--	--	77-02-24	1150	7.1	8.0	480	100
9S 10W 26DBB	391425098242301	--	--	77-02-24	1000	7.1	13.0	890	550

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
6S 9W 26CAD	120	14	93	36	2.1	7.0	480	0	394	77
8S 6W 18DA	160	17	51	19	1.0	7.0	540	0	443	34
8S 10W 19ADA	160	17	90	29	1.8	12	490	0	402	62
9S 10W 26DBB	300	33	100	20	1.5	8.0	430	0	353	55

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
6S 9W 26CAD	87	43	.1	31	652	682	2.2	.18	0	0
8S 6W 18DA	160	61	.2	37	713	770	1.1	1.7	20	100
8S 10W 19ADA	210	62	.2	37	826	838	1.2	.05	0	200
9S 10W 26DBB	630	89	.4	28	--	1410	1.7	.22	10	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
6S 9W 26CAD	0	0	0	0	20	0	0
8S 6W 18DA	0	0	10	20	7	0	160
8S 10W 19ADA	0	0	80	0	6	0	10
9S 10W 26DBB	<10	0	10	20	6	0	150

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MORRIS COUNTY

LOCAL IDENTIFIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
14S 6E 34AAC	384742096450301	120	--	77-05-17	670	7.9	15.0	360	40
14S 8E 7UAC	385044096334401	--	--	77-05-17	810	7.0	13.5	340	34

LOCAL IDENTIFIER	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
14S 6E 34AAC	95	29	33	17	.8	1.0	380	0	312	7.7
14S 8E 7UAC	100	22	35	18	.8	.8	380	0	312	61

LOCAL IDENTIFIER	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ARSENIC (AS) (UG/L)	DISSOLVED BARIUM (BA) (UG/L)
14S 6E 34AAC	51	26	.3	18	483	481	9.0	.00	0	100
14S 8E 7UAC	57	27	.2	17	476	479	7.5	.01	0	100

LOCAL IDENTIFIER	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	DISSOLVED SILVER (AG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
14S 6E 34AAC	2	0	0	0	0	0	1	0	130
14S 8E 7UAC	0	0	0	0	0	0	6	0	0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

NESS COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)
18S 24W 36ADB	382645099551201	--	77-08-05	920	7.4	16.0	381	120	110
19S 22W 1CCB	382525099424501	--	77-08-05	1140	7.3	19.0	200	0	57
20S 23W 32BBC	381622099534501	--	77-08-05	840	7.3	16.0	390	130	120

LOCAL IDENT- I- FIER	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
18S 24W 36ADB	26	43	19	1.0	12	310	0	254	20	170
19S 22W 1CCB	15	170	63	5.2	9.0	250	0	205	20	160
20S 23W 32BBC	19	29	14	.6	9.0	310	0	254	25	140

LOCAL IDENT- I- FIER	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)
18S 24W 36ADB	50	.8	24	--	590	.20	.06	0	100	0
19S 22W 1CCB	150	2.0	27	716	714	.20	.01	0	0	0
20S 23W 32BBC	39	.3	33	559	548	1.4	.07	0	0	0

LOCAL IDENT- I- FIER	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
18S 24W 36ADB	0	0	30	0	200	.0	5	0	0
19S 22W 1CCB	0	0	30	0	0	.0	3	0	0
20S 23W 32BBC	0	0	0	0	0	.0	16	0	0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

NORTON COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)
2S 21W 17ABB	395307099423301	--	77-08-24	565	6.8	16.0	292	38	94
2S 22W 34AAA	395030099463501	--	77-08-24	555	7.0	16.0	276	60	86

LOCAL IDENT-I-FIER	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
2S 21W 17ABB	14	12	8	.3	7.7	310	0	254	79	27
2S 22W 34AAA	15	11	8	.3	6.0	250	0	205	40	20

LOCAL IDENT-I-FIER	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)
2S 21W 17ABB	23	.2	41	400	6.4	.14	10	200	0	0
2S 22W 34AAA	47	.3	42	370	1.3	.04	10	200	1	0

LOCAL IDENT-I-FIER	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
2S 21W 17ABB	0	10	0	30	.0	19	0	0
2S 22W 34AAA	0	10	0	0	.0	4	0	30

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

OSBORNE COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
6S 12W 6CBB	393334098422901	60	--	77-03-08	1050	7.0	14.5	420	77
7S 12W 19BBB	392610098423301	--	--	77-03-08	1090	7.0	13.0	500	170
7S 15W 11ADD	392736098571301	60	--	77-03-08	1060	7.1	13.5	410	100
10S 15W 19BCA	391017099023401	--	--	77-03-09	1360	7.0	18.5	720	310

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
6S 12W 6CBB	130	20	81	29	1.7	15	410	0	336	66
7S 12W 19BBB	170	20	60	20	1.2	10	390	0	320	62
7S 15W 11ADD	130	18	84	31	1.8	10	350	0	287	44
10S 15W 19BCA	250	25	55	14	.9	10	520	0	427	83

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
6S 12W 6CBB	160	67	.1	45	730	729	1.4	.72	10	100
7S 12W 19BBB	170	70	.1	33	779	781	12	.19	0	0
7S 15W 11ADD	180	65	.2	34	746	732	13	.17	0	0
10S 15W 19BCA	290	82	.2	38	--	1010	4.3	.15	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
6S 12W 6CBB	0	0	10	0	3	0	0
7S 12W 19BBB	0	0	1700	0	17	0	10
7S 15W 11ADD	0	0	0	0	24	0	0
10S 15W 19BCA	<10	0	60	20	8	0	750

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

OTTAWA COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
9S 4W 15BCC	391615097453301	--	--	77-02-11	670	7.8	4.5	260	9
11S 3W 6BCA	390740097420901	150	--	77-02-11	384	6.8	14.5	156	0
12S 3W 10BA2	390213097360002	47	--	77-02-11	462	7.8	14.5	200	2
12S 5W 15ADD	390035097511901	50	--	77-02-18	780	6.9	13.5	340	39

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
9S 4W 15BCC	85	12	34	22	.9	4.0	310	0	254	7.9
11S 3W 6BCA	40	13	32	31	1.1	3.0	210	0	172	53
12S 3W 10BA2	67	9.0	27	22	.8	3.0	270	0	221	6.8
12S 5W 15ADD	110	15	50	24	1.2	3.0	370	0	303	75

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
9S 4W 15BCC	29	29	.1	34	399	401	4.5	.20	0	100
11S 3W 6BCA	38	22	.1	23	267	275	.11	.09	0	0
12S 3W 10BA2	25	16	.1	27	316	328	4.5	.24	0	0
12S 5W 15ADD	92	21	.1	30	520	527	5.2	.23	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
9S 4W 15BCC	<10	0	10	0	3	0	10
11S 3W 6BCA	0	0	10	0	1	0	0
12S 3W 10BA2	0	0	10	0	2	0	0
12S 5W 15ADD	0	0	10	0	4	0	40

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PAWNEE COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)
23S 15W 6BBD	380500099010401	--	77-07-29	550	7.4	17.0	220	11	72

LOCAL IDENT-I-FIER	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
23S 15W 6BBD	8.5	35	26	1.0	4.0	230	0	189	15	34

LOCAL IDENT-I-FIER	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
23S 15W 6BBD	32	.7	18	339	330	2.8	.02	0	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
23S 15W 6BBD	0	0	0	0	0	.0	10	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHILLIPS COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
1S 20W 23DDD	395643099320601	--	--	77-08-25	1080	7.8	16.0	489	120
4S 16W 27CCA	394019099070801	78	112THRC	77-08-25	1000	6.9	19.5	371	71
4S 18W 23DCA	394112099185701	--	--	77-08-25	720	6.8	16.0	330	66
4S 20W 34CAB	393940099335701	--	--	77-08-25	585	6.8	15.5	305	63

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
1S 20W 23DDD	150	28	55	19	1.1	18	470	0	385	12
4S 16W 27CCA	120	18	78	30	1.8	18	360	0	295	73
4S 18W 23DCA	110	11	27	15	.7	6.2	320	0	262	81
4S 20W 34CAB	96	16	20	12	.5	13	290	0	238	74

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)
1S 20W 23DDD	180	47	.1	42	780	9.6	.38	10	0	4
4S 16W 27CCA	160	50	.4	40	710	6.2	.39	20	0	0
4S 18W 23DCA	81	30	.2	30	480	4.7	.10	10	100	1
4S 20W 34CAB	94	26	.4	30	440	.10	.05	10	100	2

LOCAL IDENT- I- FIER	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
1S 20W 23DDD	0	10	200	0	120	.0	39	0	20
4S 16W 27CCA	0	0	100	0	250	.0	38	0	0
4S 18W 23DCA	0	0	0	0	0	.0	70	0	0
4S 20W 34CAB	0	0	400	20	760	.0	0	0	390

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

POTTAWATOMIE COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
7S 7E 23BBA	392606096372701	110	--	77-05-11	720	7.4	14.0	320	27
7S 9E 34CCD	392334096241901	--	--	77-05-10	770	6.9	15.0	390	80
10S 9E 9CDA	391128096251001	69	--	77-05-10	400	6.9	15.0	160	14
10S 12E 9ADB4	391152096043304	52	112WWMN	76-10-13	1180	6.8	16.0	460	130

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
7S 7E 23BBA	75	33	33	18	.8	.9	430	0	353	27
7S 9E 34CCD	120	23	23	11	.5	2.0	340	0	279	68
10S 9E 9CDA	56	6.0	16	17	.5	2.0	170	0	139	34
10S 12E 9ADB4	150	24	38	15	.8	7.0	350	0	310	89

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
7S 7E 23BBA	30	34	2.0	21	446	483	9.4	.02	0	200
7S 9E 34CCD	120	16	.3	28	510	501	.10	.01	0	0
10S 9E 9CDA	16	13	.2	32	260	256	7.0	.10	0	0
10S 12E 9ADB4	83	52	.2	39	670	641	17	.21	0	200

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
7S 7E 23BBA	3	0	10	30	0	280	--	3	0	0
7S 9E 34CCD	0	0	40	50	0	850	--	1	0	30
10S 9E 9CDA	0	0	210	240	0	10	--	1	0	0
10S 12E 9ADB4	0	0	10	--	0	--	.0	2	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PRATT COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
26S 14W 17DCB	374648098522901	100	112ODID	77-08-04	360	6.9	18.5	190	12
27S 11W 31ADD	373912098332501	--	--	77-08-03	545	7.3	18.0	260	43
28S 14W 7BBB	373749098540601	1277	112KNSN	77-08-04	395	6.8	17.0	180	16
29S 14W 23BBA	373047098493401	110	112KNSN	77-08-04	350	7.1	17.0	160	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
26S 14W 17DCB	68	4.5	15	15	.5	3.0	230	0	189	46
27S 11W 31ADD	93	7.5	17	12	.5	3.0	270	0	221	22
28S 14W 7BBB	64	5.0	16	16	.5	3.0	200	0	164	51
29S 14W 23BBA	55	5.5	16	18	.6	3.0	200	0	164	25

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
26S 14W 17DCB	11	12	.2	22	270	280	6.8	.11	0	400
27S 11W 31ADD	22	21	.2	18	340	359	11	.16	0	500
28S 14W 7BBB	15	21	.2	25	265	268	4.4	.05	0	400
29S 14W 23BBA	12	14	.2	23	237	242	3.2	.04	0	200

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
26S 14W 17DCB	0	0	70	10	0	0	.0	0	0	80
27S 11W 31ADD	3	0	220	60	50	10	.0	0	0	2500
28S 14W 7BBB	0	0	0	0	0	0	.0	1	0	20
29S 14W 23BBA	0	0	10	0	0	0	.0	0	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

RAWLINS COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
3S 36W 17CCC	394711101233201	300	121OGLL	77-08-09	450	7.7	18.0	161	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
3S 36W 17CCC	35	18	35	31	1.2	8.9	220	0	180	7.0

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
3S 36W 17CCC	32	11	2.8	42	320	5.6	.00	10	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
3S 36W 17CCC	0	0	0	0	0	.0	2	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

RENO COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
22S 4W 12DDD	380845097421001	98	112MCPR	77-08-19	585	7.3	15.0	302	4
23S 7W 1ABA	380509098021901	--	--	77-09-07	835	6.9	22.0	170	0
24S 10W 15BDC	375747098245101	--	--	77-08-19	450	7.0	18.0	149	19
25S 4W 5DAD	375408097462901	--	--	77-09-08	730	6.6	19.0	279	5
25S 8W 10ABC	375340098110901	58	112WEDE	77-08-05	585	7.0	16.0	140	30

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
22S 4W 12DDD	93	17	35	20	.9	.9	410	0	336	33
23S 7W 1ABA	56	7.3	96	55	3.2	3.1	270	0	221	54
24S 10W 15BDC	48	7.0	37	35	1.3	2.4	180	0	148	29
25S 4W 5DAD	87	15	50	28	1.3	1.7	390	0	320	157
25S 8W 10ABC	48	5.5	67	50	2.4	2.0	170	0	139	27

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
22S 4W 12DDD	54	19	.2	26	--	430	1.9	.05	0	100
23S 7W 1ABA	49	70	.6	13	--	548	9.7	.09	0	100
24S 10W 15BDC	25	45	.2	23	--	300	5.5	.10	0	100
25S 4W 5DAD	27	59	.3	24	--	456	4.3	.08	0	300
25S 8W 10ABC	21	93	.2	22	369	388	10	.07	0	400

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
22S 4W 12DDD	4	0	0	220	0	160	.0	2	0	0
23S 7W 1ABA	6	0	60	0	90	120	6.0	6	0	90
24S 10W 15BDC	2	0	70	170	0	0	.0	0	0	80
25S 4W 5DAD	7	0	30	10	40	0	.0	0	0	30
25S 8W 10ABC	0	0	170	290	0	0	.0	0	0	180

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

REPUBLIC COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
1S 2W 33DCD	395458097323501	62	--	77-04-07	1050	6.7	13.5	510	66
1S 3W 2CCB	395926097374801	200	--	77-04-07	510	7.6	14.0	270	0
3S 4W 17DAB	394728097470701	--	--	77-04-07	870	7.4	15.0	460	0
4S 1W 16ACC	394222097255901	100	--	77-04-08	610	7.1	14.5	290	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
1S 2W 33DCD	180	17	57	19	1.1	4.0	390	0	320	125
1S 3W 2CCB	90	10	18	13	.5	2.0	420	0	344	17
3S 4W 17DAB	150	20	48	18	1.0	12	380	0	312	24
4S 1W 16ACC	100	9.5	29	18	.7	2.0	370	0	303	47

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
1S 2W 33DCD	99	63	.2	27	770	740	23	.06	0	0
1S 3W 2CCB	14	21	.1	42	370	424	4.5	.11	0	100
3S 4W 17DAB	180	69	.4	32	684	680	.14	.10	0	200
4S 1W 16ACC	35	18	.1	30	417	418	2.7	.08	0	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CU) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
1S 2W 33DCD	0	0	10	0	.0	30	0	10
1S 3W 2CCB	0	0	20	0	.0	5	0	20
3S 4W 17DAB	2	0	10	0	.0	3	0	50
4S 1W 16ACC	0	0	10	0	.0	2	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

RICE COUNTY

LOCAL IDENTIFIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEOLOGIC UNIT	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
19S 6W 17ABB2	382420098602302	34	--	77-04-04	880	6.6	14.5	290	100
19S 9W 31DAB	382116098210601	60	--	77-04-12	1100	7.1	16.0	340	0
20S 8W 17ADD	381846098131301	67	--	77-04-04	820	8.0	15.0	290	41
20S 10W 26CBC	381648098241001	--	--	77-04-12	1020	7.2	14.0	400	0
21S 8W 21BAC	381252098124701	120	--	77-04-12	890	7.3	15.0	270	0

LOCAL IDENTIFIER	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
19S 6W 17ABB2	99	10	75	36	1.9	2.0	220	0	180	88
19S 9W 31DAB	120	12	110	40	2.6	4.0	300	0	246	38
20S 8W 17ADD	91	16	73	35	1.9	3.0	270	0	221	4.3
20S 10W 26CBC	130	18	79	30	1.7	3.0	400	0	328	40
21S 8W 21BAC	82	16	95	43	2.5	4.0	250	0	205	20

LOCAL IDENTIFIER	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ARSENIC (AS) (UG/L)	DISSOLVED BARIUM (BA) (UG/L)
19S 6W 17ABB2	22	170	.2	22	528	527	4.1	.06	0	300
19S 9W 31DAB	28	220	.2	28	677	691	4.5	.17	0	300
20S 8W 17ADD	63	100	.2	27	538	520	2.9	.27	0	100
20S 10W 26CBC	56	100	.4	25	680	674	15	.25	0	200
21S 8W 21BAC	90	99	1.0	16	566	553	5.9	.19	0	0

LOCAL IDENTIFIER	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MERCURY (HG) (UG/L)	DISSOLVED SELENIUM (SE) (UG/L)	DISSOLVED SILVER (AG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
19S 6W 17ABB2	0	0	10	0	.0	3	0	10
19S 9W 31DAB	0	0	10	0	.0	2	0	10
20S 8W 17ADD	0	0	10	0	.0	4	0	0
20S 10W 26CBC	0	0	20	0	.0	2	0	10
21S 8W 21BAC	0	0	10	0	.0	22	0	10

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

RILEY COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
7S 6E 28AAA	392515096452701	70	--	77-04-06	1860	6.8	15.0	1300	840
9S 5E 18CB	391805096494601	100	--	77-04-06	700	6.8	15.0	340	0
10S 7E 32DAD	390808096400901	--	--	77-04-06	610	6.7	16.5	300	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
7S 6E 28AAA	430	45	39	6	.5	2.0	350	0	287	89
9S 5E 18CB	82	33	33	17	.8	1.0	420	0	344	107
10S 7E 32DBD	96	14	33	19	.8	4.0	370	0	303	118

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
7S 6E 28AAA	970	50	.6	16	--	1730	.84	.01	0	0
9S 5E 18CB	16	17	.1	19	448	437	6.6	.03	0	300
10S 7E 32DAD	40	12	.2	30	427	426	2.9	.36	0	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
7S 6E 28AAA	0	0	10	40	.0	4	0	0
9S 5E 18CB	0	0	0	0	1.0	3	0	60
10S 7E 32DAD	0	0	10	0	.0	2	0	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

ROOKS COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)
7S 18W 24BAD	392606099164401	--	77-08-26	2000	6.6	17.0	954	490	300
8S 20W 31ACB	391901099353301	--	77-08-26	2020	7.2	15.0	1170	1050	380
9S 18W 35CCD	391315099180901	--	77-08-26	850	6.8	20.0	355	150	120

LOCAL IDENT- I- FIER	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
7S 18W 24BAD	53	190	29	2.7	21	540	0	443	217	590
8S 20W 31ACB	54	130	19	1.7	16	310	0	254	31	1170
9S 18W 35CCD	16	45	21	1.0	10	230	0	189	58	160

LOCAL IDENT- I- FIER	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
7S 18W 24BAD	210	.4	27	1690	4.3	1.6	10	200	4	0
8S 20W 31ACB	90	.8	13	1950	6.9	.07	0	100	2	0
9S 18W 35CCD	67	.4	28	580	1.9	.05	10	0	1	0

LOCAL IDENT- I- FIER	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
7S 18W 24BAD	10	0	20	720	.0	20	0	20
8S 20W 31ACB	10	10	50	0	.0	0	0	20
9S 18W 35CCD	10	0	0	0	.0	6	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

RUSH COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
16S 18W 16DCC	383916099190601	--	--	77-08-18	2250	7.2	21.0	184	0
17S 20W 5BCB	383619099340601	--	--	77-08-18	1420	7.8	19.5	42	0
18S 16W 23AAA2	382042099030902	--	--	77-08-19	910	7.0	15.5	378	78
18S 17W 23CBB	382016099104601	--	--	77-08-19	1140	6.6	16.0	528	170
18S 18W 22DDD	382755099173201	--	--	77-08-18	1180	7.1	24.0	463	180
18S 20W 20DCA	382802099332201	47	112FLVL	77-08-18	1300	6.8	20.0	624	270

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
16S 18W 16DCC	59	9.0	380	81	12	7.4	300	0	246	30
17S 20W 5BCB	9.5	4.5	270	92	18	6.6	250	0	205	6.3
18S 16W 23AAA2	130	13	29	14	.6	4.6	320	0	262	51
18S 17W 23CBB	190	15	27	10	.5	4.7	423	0	347	170
18S 18W 22DDD	160	18	72	24	1.4	9.0	420	0	344	53
18S 20W 20DCA	220	19	33	10	.6	5.6	410	0	336	104

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
16S 18W 16DCC	160	400	2.4	15	1200	4.1	.02	0	0	0
17S 20W 5BCB	160	180	3.0	8.8	780	.10	.02	0	0	0
18S 16W 23AAA2	61	58	.2	33	510	2.1	.10	10	200	0
18S 17W 23CBB	140	61	.1	34	690	.00	.01	10	200	0
18S 18W 22DDD	180	67	.2	27	740	.10	.03	0	200	0
18S 20W 20DCA	190	100	.2	34	840	5.4	.12	0	100	0

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
16S 18W 16DCC	0	0	0	0	0	.0	5	0	150
17S 20W 5BCB	0	0	200	0	0	.0	0	0	0
18S 16W 23AAA2	0	10	0	0	0	.0	4	0	20
18S 17W 23CBB	0	0	1400	0	20	.0	0	0	0
18S 18W 22DDD	0	10	10	0	160	.0	0	0	50
18S 20W 20DCA	0	0	0	0	0	.0	18	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

RUSSELL COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
11S 12W 7DDB	390623098412701	37	--	77-03-09	1450	7.0	14.0	520	190
11S 14W 7CAA	390635098550901	45	--	77-03-09	2020	6.8	14.0	1200	850
14S 11W 7CAB	385055098352901	--	--	77-03-10	1160	6.7	16.0	500	220
14S 14W 1CCC	385128098501301	--	--	77-03-09	1710	6.9	14.5	560	220

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
11S 12W 7DDB	170	21	150	39	2.9	6.0	400	0	328	64
11S 14W 7CAA	390	50	108	15	1.3	12	430	0	353	109
14S 11W 7CAB	180	10	69	23	1.4	5.0	360	0	295	115
14S 14W 1CCC	200	14	170	40	3.1	6.0	450	0	369	91

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
11S 12W 7DDB	210	180	.1	29	--	1020	13	.09	0	0
11S 14W 7CAA	870	95	.6	27	--	1780	2.3	.08	0	0
14S 11W 7CAB	160	130	.1	27	781	782	5.0	.06	0	0
14S 14W 1CCC	220	250	.3	35	--	1110	1.8	.21	0	0

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
11S 12W 7DDB	<10	0	10	0	30	0	0
11S 14W 7CAA	<10	0	20	0	20	0	0
14S 11W 7CAB	0	0	40	0	3	0	1300
14S 14W 1CCC	0	0	10	0	6	0	10

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SALINE COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
14S 3W 25BAD	384836097361501	--	--	77-02-18	1090	6.7	15.0	600	190
15S 2W 26DDD	384242097300901	--	--	77-02-18	430	6.9	14.5	170	11
15S 5W 4ABB	384658097525001	80	--	77-02-18	1900	6.6	15.5	670	370

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
14S 3W 25BAD	180	36	36	11	.6	10	490	0	402	156
15S 2W 26DDD	48	13	25	24	.8	1.0	210	0	172	42
15S 5W 4ABB	140	76	200	39	3.4	8.0	390	0	320	157

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
14S 3W 25BAD	200	46	.1	29	798	795	3.4	.39	0	0
15S 2W 26DDD	50	15	.2	19	268	275	.00	.02	0	0
15S 5W 4ABB	400	270	.6	16	--	1300	.02	.23	10	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
14S 3W 25BAD	0	0	0	0	27	0	0
15S 2W 26DDD	0	0	10	0	1	0	0
15S 5W 4ABB	0	0	0	20	1	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SCOTT COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
17S 32W 5ABB	383645100523901	208	121OGLL	77-07-11	730	7.3	14.5	290	100
17S 33W 7BBB	383553101005701	202	121OGLL	77-07-12	550	7.6	22.0	200	11
18S 32W 14BBB	382947100495001	180	121OGLL	77-07-13	510	7.8	15.0	220	25
18S 33W 5CCC	383046100594901	119	121OGLL	77-07-11	500	7.6	14.0	200	19
19S 31W 20BAD	382333100460001	134	211NBRR	77-07-13	810	7.5	14.5	370	180
19S 33W 25DCD	382204100544001	1067	121OGLL	77-06-29	910	7.7	22.0	390	130

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
17S 32W 5ABB	77	23	33	20	.8	6.0	230	0	189	10
17S 33W 7BBB	47	20	35	27	1.1	6.0	220	0	180	8.8
18S 32W 14BBB	49	25	27	20	.8	6.0	240	0	197	6.1
18S 33W 5CCC	42	22	26	22	.8	6.0	200	0	164	8.0
19S 31W 20BAD	120	20	28	13	.6	7.0	230	0	189	12
19S 33W 25DCD	87	41	53	22	1.2	9.0	310	0	254	9.9

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
17S 32W 5ABB	93	39	2.0	51	--	466	6.8	.02	10	0
17S 33W 7BBB	57	19	2.2	42	353	349	2.7	.01	10	0
18S 32W 14BBB	39	16	2.4	42	351	349	5.6	.00	10	0
18S 33W 5CCC	50	15	2.2	54	334	327	2.6	.01	10	0
19S 31W 20BAD	80	90	.4	32	526	527	8.3	.01	0	0
19S 33W 25DCD	170	38	2.1	32	610	610	5.6	.02	10	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
17S 32W 5ABB	1	0	0	0	0	0	.0	9	0	0
17S 33W 7BBB	0	0	0	10	0	0	.0	4	0	0
18S 32W 14BBB	0	0	0	0	0	0	.0	5	0	0
18S 33W 5CCC	0	0	0	0	0	0	.0	3	0	0
19S 31W 20BAD	0	0	0	0	0	0	.0	13	0	0
19S 33W 25DCD	0	0	0	0	0	0	--	13	0	0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SEDGWICK COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
25S 1W 7HAA	375348097281901	--	--	77-08-16	593	7.4	19.5	231	17
25S 1W 25DAD	375039097222201	40	--	77-07-12	610	7.0	21.0	280	50
25S 3W 16CCC	375211097393901	90	--	77-07-12	950	8.0	19.0	200	0
26S 2W 29AAA3	374600097331403	--	--	77-08-16	663	7.3	19.5	234	0
27S 2W 32BBB	373954097341101	54	--	77-07-13	920	7.1	20.0	360	80
29S 2W 23DDA	373031097295401	52	--	77-07-13	550	6.8	23.5	220	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
25S 1W 7BAA	73	12	41	28	1.2	2.3	250	0	205	16
25S 1W 25DAD	61	19	25	16	.6	2.0	320	0	262	51
25S 3W 16CCC	61	12	130	50	4.0	4.0	250	0	205	4.0
26S 2W 29AAA3	69	15	59	35	1.7	1.6	320	0	262	26
27S 2W 32BBB	120	16	74	30	1.7	2.0	440	0	361	56
29S 2W 23DDA	67	12	34	25	1.0	3.0	270	0	221	68

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
25S 1W 7BAA	59	25	.3	24	--	380	4.0	.05	0	100
25S 1W 25DAD	89	16	.2	17	386	407	.10	.08	0	0
25S 3W 16CCC	66	140	.3	16	555	556	.80	.07	0	0
26S 2W 29AAA3	39	29	.2	22	--	410	3.2	.11	0	100
27S 2W 32BBB	54	130	.3	20	600	646	2.8	.07	0	100
29S 2W 23DDA	29	23	.2	27	347	343	3.3	.16	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
25S 1W 7HAA	0	0	0	10	0	60	.6	20	0	0
25S 1W 25DAD	0	0	0	10	0	120	.0	0	0	0
25S 3W 16CCC	3	0	0	10	0	0	.0	3	0	0
26S 2W 29AAA3	0	0	30	0	0	0	2.0	0	0	0
27S 2W 32BBB	2	0	0	20	0	0	.0	7	0	0
29S 2W 23DDA	0	0	20	20	0	0	.0	1	0	40

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SHAWNEE COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
10S 15E 17CDD	391025095460801	50	--	77-09-27	1460	6.8	22.0	462	170
13S 16E 21ABB2	385441095382102	15	322CLMN	77-09-26	600	6.5	25.0	291	25

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
10S 15E 17CDD	140	28	130	38	2.6	3.4	350	0	287	89
13S 16E 21ABB2	100	9.8	9.9	7	.3	.3	330	0	271	167

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
10S 15E 17CDD	150	120	.3	18	920	35	.01	0	100	5
13S 16E 21ABB2	34	11	.1	15	350	1.0	.01	0	100	2

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
10S 15E 17CDD	0	10	10	0	0	.0	0	0	1300
13S 16E 21ABB2	0	10	0	0	0	.0	0	0	70

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SHERMAN COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
7S 37W 5CCB	392811101285301	300	121OGLL	77-08-10	490	7.7	16.0	181	0
7S 40W 6ADB	392836101491801	345	121OGLL	77-08-10	360	7.6	16.5	134	0
8S 37W 32ABB	391917101282301	217	121OGLL	77-08-08	460	7.5	15.0	174	0
8S 39W 17DCD	392107101413901	300	121OGLL	77-08-08	560	7.7	16.5	200	42
9S 41W 14BBC	391632101522601	--	--	77-08-08	550	7.6	15.0	218	50
10S 40W 10ADC	391158101460401	68	121OGLL	77-08-11	860	7.3	14.0	292	2

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
7S 37W 5CCB	43	18	34	28	1.1	5.3	120	0	98	3.8
7S 40W 6ADB	34	12	26	30	1.1	4.2	130	0	107	5.2
8S 37W 32ABB	45	15	29	26	1.0	4.6	210	0	172	11
8S 39W 17DCD	49	19	38	29	1.2	4.7	190	0	156	6.1
9S 41W 14BBC	56	19	28	21	.8	4.2	200	0	164	8.0
10S 40W 10ADC	84	20	69	33	1.8	5.0	340	0	279	27

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
7S 37W 5CCB	41	14	1.8	42	330	4.9	.00	0	0	0
7S 40W 6ADB	16	10	.9	42	260	2.7	.00	0	0	0
8S 37W 32ABB	34	14	.9	35	300	4.4	.00	0	0	0
8S 39W 17DCD	54	29	1.3	41	380	11	.00	0	0	0
9S 41W 14BBC	47	22	.9	34	360	12	.00	0	0	0
10S 40W 10ADC	120	18	.8	22	540	4.7	.01	0	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
7S 37W 5CCB	0	0	0	0	0	.0	4	0	0
7S 40W 6ADB	0	0	0	0	0	.0	1	0	0
8S 37W 32ABB	0	0	0	0	0	.0	3	0	0
8S 39W 17DCD	0	0	10	0	0	.0	6	0	0
9S 41W 14BBC	0	0	0	0	0	.0	5	0	0
10S 40W 10ADC	0	0	0	0	0	.0	4	0	0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SMITH COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA+MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
3S 11W 4AAC	394933098340301	35	--	77-03-07	850	6.9	14.0	360	120
3S 15W 20DCC	394618099021301	60	--	77-03-07	830	6.9	14.0	400	110
5S 14W 10BB	393847098510101	--	--	77-03-08	1120	7.0	14.0	490	130

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
3S 11W 4AAC	130	10	52	23	1.2	3.0	280	0	230	56
3S 15W 20DCC	130	18	32	15	.7	7.0	340	0	279	68
5S 14W 10BB	160	23	70	23	1.4	16	440	0	361	70

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
3S 11W 4AAC	89	86	.2	30	563	561	5.0	.23	0	200
3S 15W 20DCC	88	49	.3	39	578	573	9.5	.08	10	0
5S 14W 10BB	200	70	.1	47	802	804	.11	.33	10	100

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
3S 11W 4AAC	0	0	0	0	18	0	0
3S 15W 20DCC	0	0	0	0	40	0	0
5S 14W 10BB	0	0	0	0	2	0	10

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STAFFORD COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
22S 13W 21DDB	380703098450301	--	--	77-08-17	542	7.2	19.0	191	0
23S 13W 33BDB	380028098453601	80	112MEDE	77-08-16	1240	7.0	21.5	234	6
24S 15W 15CD	375724098573601	741	112MEDE	77-08-16	580	7.0	23.0	197	3
25S 11W 1BCB	375423098292301	--	--	77-08-15	700	7.6	22.0	153	11
25S 14W 24DBC	375124098483701	--	--	77-08-17	460	7.2	17.0	169	0
25S 15W 31DDB	374934099002301	--	--	77-08-17	370	7.2	16.5	158	8

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
22S 13W 21DDB	70	4.0	24	21	.8	3.4	260	0	213	26
23S 13W 33BDB	74	12	48	30	1.4	3.1	280	0	230	45
24S 15W 15CD	70	5.5	32	25	1.0	5.0	240	0	197	38
25S 11W 1BCB	54	4.5	35	33	1.2	1.2	160	0	131	6.4
25S 14W 24DBC	61	4.0	24	23	.8	2.7	210	0	172	21
25S 15W 31DDB	55	5.0	15	17	.5	2.1	180	0	148	18

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
22S 13W 21DDB	19	21	.3	15	290	3.5	.03	0	200	0
23S 13W 33BDB	38	47	.4	21	400	4.8	.05	0	300	0
24S 15W 15CD	36	34	.4	15	320	.30	.02	0	0	0
25S 11W 1BCB	19	37	.1	19	280	6.3	.05	0	600	0
25S 14W 24DBC	11	27	.3	20	260	2.7	.02	0	300	0
25S 15W 31DDB	14	12	.3	21	240	5.2	.05	0	300	0

LOCAL IDENT-I-FIER	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
22S 13W 21DDB	0	0	100	0	20	.0	1	0	10
23S 13W 33BDB	0	0	0	0	0	.9	0	0	10
24S 15W 15CD	0	0	0	0	0	.0	0	0	10
25S 11W 1BCB	0	0	0	0	0	.0	0	0	10
25S 14W 24DBC	0	0	0	0	0	.0	1	0	0
25S 15W 31DDB	0	0	10	0	0	.0	0	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

SUMNER COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
31S 1E 4BDC	372307097192901	47	--	77-03-03	1420	6.8	16.5	480	120
31S 2E 2BBB	372325097110701	30	--	77-03-29	665	6.9	15.0	310	110
31S 3W 5BDC	372257097401901	40	--	77-03-03	240	6.6	16.5	79	37
32S 4W 9CCC4	371624097455604	74	--	77-03-01	440	6.9	16.0	180	11
33S 2W 6ABA	371249097341601	--	--	77-03-02	1080	7.1	15.0	490	200
34S 1W 26AAC	370406097231001	--	--	77-03-02	1190	6.9	15.5	440	190
34S 2W 22BCA	370445097312801	40	--	77-03-02	640	7.2	16.0	290	48

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
31S 1E 4BDC	150	29	100	30	2.0	3.0	450	0	369	114
31S 2E 2BBB	100	14	23	14	[illegible]	5.0	240	0	197	48
31S 3W 5BDC	20	7.0	16	30	.8	1.0	38	0	31	15
32S 4W 9CCC4	43	17	23	22	.8	1.0	170	0	139	34
33S 2W 6ABA	130	42	61	21	1.2	2.0	340	0	279	43
34S 1W 26AAC	120	37	78	25	1.4	2.0	310	0	254	62
34S 2W 22BCA	80	22	33	20	.8	3.0	290	0	238	29

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
31S 1E 4BDC	57	200	.1	24	785	791	1.1	.26	0	100
31S 2E 2BBB	110	21	.2	19	439	436	5.6	.24	0	100
31S 3W 5BDC	18	10	.1	32	185	178	12	.14	0	100
32S 4W 9CCC4	22	10	.1	21	275	260	8.8	.03	10	100
33S 2W 6ABA	200	85	.1	24	732	727	3.4	.06	0	0
34S 1W 26AAC	77	160	.1	25	672	674	6.8	.09	E0	100
34S 2W 22BCA	67	44	.1	15	411	408	.02	.39	10	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
31S 1E 4BDC	0	0	10	0	--	3	0	0
31S 2E 2BBB	0	0	0	0	.0	1	0	0
31S 3W 5BDC	0	0	20	0	--	0	0	0
32S 4W 9CCC4	0	0	0	0	--	1	0	10
33S 2W 6ABA	0	0	10	20	--	2	0	0
34S 1W 26AAC	0	0	0	0	--	9	0	0
34S 2W 22BCA	0	0	0	0	--	0	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WABAUNSEE COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)
10S 10E 16ABB1	391115096101901	--	77-08-18	726	7.3	16.0	350	50	120
14S 8E 2AAA	385207096290101	--	77-05-17	710	8.3	16.0	360	34	85

LOCAL IDENT- I- FIER	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
10S 10E 16ABB1	13	17	9	.4	8.8	420	0	344	34	56
14S 8E 2AAA	35	33	17	.8	1.0	390	0	320	3.1	77

LOCAL IDENT- I- FIER	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)
10S 10E 16ABB1	30	.2	26	--	450	.10	.01	10	400	0
14S 8E 2AAA	20	.6	13	467	460	2.5	.00	0	100	0

LOCAL IDENT- I- FIER	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
10S 10E 16ABB1	0	0	0	0	1000	.0	0	0	0
14S 8E 2AAA	0	0	10	0	0	--	17	0	300

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WALLACE COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA+MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
11S 38W 35CCC2	390254101305402	189	121OGLL	77-08-11	640	7.2	16.0	278	120
13S 40W 10ABB	385641101445301	45	112ALVM	77-06-21	1520	7.6	15.0	620	400
14S 42W 22BDD	384927101562701	432	121OGLL	77-06-21	350	7.9	17.0	140	0
15S 38W 7BBB	384616101353801	178	121OGLL	77-06-22	440	7.9	17.0	160	4

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
11S 38W 35CCC2	77	21	28	13	.5	6.0	200	0	164	20
13S 40W 10ABB	180	44	120	29	2.1	11	230	0	189	9.2
14S 42W 22BDD	36	11	26	29	1.0	4.0	170	0	139	3.4
15S 38W 7BBB	41	15	31	28	1.1	5.0	190	0	156	3.8

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
11S 38W 35CCC2	100	47	.3	25	--	400	2.6	.01	0	0
13S 40W 10ABB	570	45	.7	24	--	1130	3.2	.02	0	0
14S 42W 22BDD	26	12	.9	23	240	235	2.7	.01	0	0
15S 38W 7BBB	45	20	1.5	24	295	295	4.3	.01	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
11S 38W 35CCC2	0	0	0	0	0	0	.0	6	0	0
13S 40W 10ABB	0	0	0	10	20	0	--	11	0	0
14S 42W 22BDD	0	0	0	10	0	0	--	2	0	0
15S 38W 7BBB	0	0	0	10	0	0	--	4	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WASHINGTON COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
2S 1E 21BAB	395215097193101	--	--	77-04-07	600	6.9	13.5	280	
2S 5E 9DAB	395330096514701	--	--	77-05-13	1220	6.8	13.5	560	0
3S 2E 32ABB	394518097133001	120	--	77-05-13	300	7.9	13.5	120	400
4S 5E 9CAA2	394305096520902	115	--	77-05-12	720	7.0	14.0	420	0
5S 2E 12CBA	393754097093201	88	--	77-05-13	260	6.5	14.5	88	600
							14.0		16

LOCAL IDENT-I-FIER	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
2S 1E 21BAB	98	8.0	40	24	1.0	3.0	370	0	303	75
2S 5E 9DAB	140	50	20	7	.4	4.0	450	0	369	114
3S 2E 32ABB	35	8.6	29	33	1.1	2.0	180	0	148	3.6
4S 5E 9CAA2	96	45	22	10	.5	2.0	460	0	377	74
5S 2E 12CBA	30	4.5	20	31	.9	1.0	88	0	72	45

LOCAL IDENT-I-FIER	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)
2S 1E 21BAB	45	19	.2	34	432	434	.93	.18	0	200
2S 5E 9DAB	380	28	.3	26	778	901	7.0	.20	0	0
3S 2E 32ABB	27	14	.2	25	235	244	3.2	.12	0	100
4S 5E 9CAA2	56	21	.2	22	522	530	8.9	.04	0	100
5S 2E 12CBA	18	18	.3	18	187	187	7.6	.06	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
2S 1E 21BAB	0	0	0	--	0	--	.0	3	0	0
2S 5E 9DAB	6	0	0	30	0	20	--	16	0	0
3S 2E 32ABB	0	0	0	0	0	0	--	3	0	20
4S 5E 9CAA2	0	0	0	20	0	0	--	3	0	0
5S 2E 12CBA	0	0	0	30	0	0	--	0	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WICHITA COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	TOTAL DEPTH OF WELL (FT)	GEO- LOGIC UNIT	DATE OF SAMPLE	SPF- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
16S 35W 31DBA	383712101133001	178	121OGLL	77-07-12	730	7.8	14.0	280	120
16S 37W 30ACB	383816101264801	220	121OGLL	77-07-12	710	7.7	14.5	260	91
18S 35W 34ABB	382711101101701	143	121OGLL	77-06-23	590	7.7	15.0	230	24
18S 36W 15DAD	382913101163001	165	121OGLL	77-06-23	560	7.7	15.0	220	68
18S 37W 3CCC	383043101240301	190	121OGLL	77-06-22	750	7.6	17.0	300	18
20S 38W 17CBD	381840101324401	--	121OGLL	77-07-12	580	7.9	14.5	220	66

LOCAL IDENT- I- FIER	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
16S 35W 31DBA	73	25	30	18	.8	6.0	220	0	180	5.6
16S 37W 30ACB	60	27	38	24	1.0	6.0	200	0	164	6.4
18S 35W 34ABB	55	22	35	24	1.0	6.0	240	0	197	7.7
18S 36W 15DAD	51	23	27	20	.8	5.0	180	0	148	5.7
18S 37W 3CCC	70	29	34	20	.9	5.0	190	0	156	7.6
20S 38W 17CBD	42	28	35	25	1.0	6.0	180	0	148	3.6

LOCAL IDENT- I- FIER	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)
16S 35W 31DBA	100	44	1.7	26	432	434	4.5	.00	0	0
16S 37W 30ACB	9.2	49	1.6	26	430	343	6.3	.00	10	0
18S 35W 34ABB	57	26	1.9	--	350	--	4.0	.02	10	0
18S 36W 15DAD	71	33	1.7	--	340	--	5.8	.01	10	0
18S 37W 3CCC	99	61	1.6	--	440	--	5.0	.02	0	0
20S 38W 17CBD	73	38	1.5	27	362	359	4.4	.01	10	0

LOCAL IDENT- I- FIER	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
16S 35W 31DBA	0	0	0	10	0	0	.0	9	--	0
16S 37W 30ACB	1	0	0	0	0	0	.0	10	0	0
18S 35W 34ABB	0	0	0	0	20	0	--	4	0	0
18S 36W 15DAD	0	0	0	10	0	0	--	6	0	0
18S 37W 3CCC	0	0	0	10	20	980	--	19	0	0
20S 38W 17CBD	0	0	0	0	0	0	.0	8	0	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

WOODSON COUNTY

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (CA+MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)
25S 15E 8DAD	375307095463701	322DDLS	77-08-30	431	6.9	18.5	161	37	48

LOCAL IDENT-I-FIER	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
25S 15E 8DAD	10	22	23	.8	1.1	140	0	115	28	68

LOCAL IDENT-I-FIER	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)
25S 15E 8DAD	13	.2	12	250	1.5	.01	0	0	0	0

LOCAL IDENT-I-FIER	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
25S 15E 8DAD	10	10	0	0	.0	0	0	40

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